Influence of Teachers Performance Appraisal and Development of Students' Academic Performance in Public Secondary Schools In Transmara East -East Sub County, Narok County, Kenya

Kirui, Nathan Kipkoech

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INFLUENCE OF TEACHER PERFORMANCE APPRAISAL AND DEVELOPMENT ON STUDENTS' ACADEMIC PERFORMANCE IN PUBLIC SECONDARY SCHOOLS IN TRANSMARA EAST SUB-COUNTY, NAROK COUNTY, KENYA.

BY

NATHAN KIPKOECH KIRUI

A Thesis Submitted to the Board of Graduate Studies in Partial Fulfilment of the Requirements for Conferment of the Degree of Master of Education (Educational Administration) of the University of Kabianga.

UNIVERSITY OF KABIANGA

September 2023

DECLARATION

This thesis is my original work and has not been presented for an award of a degree or diploma in this or any other university:

Signature..... Date..03/10/2023.....

Nathan Kipkoech Kirui

PGC/PAC/008/19

Approval

This thesis has been submitted for examination with our approval as the university supervisors:

Signature..... Date..3/10/2023.....

Dr. Viviline Ng'eno,

Department of Educational Administration and Planning,

University of Kabianga.

Signature..... Date..03/10/2023.....

Dr. Benedicta Aiyobei Tabot,

Department of Curriculum, Instruction and Educational Media,

University of Kabianga.

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DEDICATION

This research thesis is dedicated to my wife and children for their moral support throughout the period of the study.

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God bless you abundantly.

ABSTRACT

Teacher Performance Appraisal and Development takes a crucial part in enhancing staffs' performance, reward, motivation and training. A thorough inspection of most public secondary schools in Trans Mara East Sub-County, disclosed a declined in Kenya Certificate of Secondary Education schools' average performance from 2018 to 2022. Whether Teacher Performance Appraisal and Development (TPAD) implementation has influence on performance of a leaner's academic achievement is not evident. Hence, this study was to investigate the influence of teacher performance appraisal and development on students' academic performance in public secondary schools in Trans Mara East Sub-County, Kenya. It was guided by the following specific objectives; to assess the influence of professional knowledge, to establish influence of learning environment, to determine the influence of teachers' professionalism and to examine the influence of professional learning community on the academic performance of students in public secondary schools in Trans Mara East Sub-County. It was steered by Goal Setting theory of Motivation and Feedback intervention theory (FIT). It adopted descriptive survey design. 277 respondents consisting of 1 Teacher Service Commission (TSC) Sub-County director, 34 principals, 242 TSC teachers from 34 public secondary school teachers in Trans Mara East Sub-County took part. Stratified random sampling technique to get 164 respondents comprising of 1 TSC sub-county director, 20 principals and 143 teachers employed by TSC used. Questionnaires were utilized to get data from teachers while interview schedule was given to TSC Sub-County director and principals. Test-retest and content validity index were applied to guarantee reliability and validity of research instruments respectively. Data collected were of both quantitative and qualitative. Quantitative facts were evaluated by descriptive statistics; frequency, mean and standard deviation as well as inferential statistics where multiple linear regression model was adopted to ascertain the relationship between TPAD indicators and students' achievement. The quantitative results were presented in tables. Qualitative data was analysed thematically which was triangulated with quantitative data. Findings reveals that teachers in their professional knowledge showed mastery of subject content, uses appropriate teaching styles, develops required documentation, learning assessment, utilize learning and teaching resources sufficiently. Hence, professional knowledge had positive significant influence on academic performance of students (β_1=0.206, P=0.032<0.05). Teachers are able to create learning environment for learners, ensure safety and control learners' behaviours. Comprehensive learning environment positively and significantly influence academic performance of students (β_2=0.191, P=0.019<0.05). Teachers achieves professional, ethical and legal requirement therefore, teachers' professionalism had positive significant influence on academic performance of students (β_3=0.486, P=0.000<0.05). Finally, teachers poorly participate in professional learning community though it had positive significant influence on academic performance of students (β_4 =0.250, P=0.000<0.05). The study concludes that professional knowledge, comprehensive learning environment, and teachers' professionalism has positive significant influence on students' academic performance in public secondary schools in Trans Mara East Sub-County, Kenya. The study recommended that the government should improve in training, assessment and e-resource for ICT integration in learning and teaching of students.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
FIT	Feedback intervention theory
KCSE	Kenya Certificate of Secondary Education
KNBS	Kenya National Bureau of Statistics
KNUT	Kenya National Union of Teachers
KUPPET	Kenya Union of Post Primary Education Teachers
NACOSTI	National Commission for Science, Technology and Innovations
OECD	Organization for Economic Co-operation and Development
PA	Performance Appraisal
PAS	Performance Appraisal System
PC	Performance Contract
PLC	Professional Learning Community
SPSS	Statistical Package of Social Sciences
TPA	Teacher Performance Appraisal
TPAD	Teacher Performance Appraisal and Development
TPI	Teacher Performance and Integration
TSC	Teachers Service Commission
USA	United State of America

OPERATIONAL DEFINITION OF TERMS

Academic Performance	Refer to the degree of learners' achievement in relations of marks/grades attained in internal exam which is evaluated as score index as ratio of target and end term mean score.
Learning Environment	It refers to assessment of teachers' role in improvement of surrounding through planned activities, classroom stimulation, ability to ensure learner safety and management of learners as measure in the TPAD.
Performance Appraisal	Refer to an approach for assessing the worth, value, and merit of a teacher's present performance with regards to TPAD.
Professional Knowledge	This denotes the capability of a teacher to exhibit mastery of content, prepare professional documents, learner assessment and lesson observation which is a measure in TPAD.
Professional Learning Community	This refers to the ability of teacher to join professional learning community, collaborate with colleagues, collaborate with parents and collaborate with communities as measured by TPAD.
Teacher Professionalism	It refers to the teacher's adherence to ethical standards, observation of punctuality, timely syllabus coverage, legal and professional requirement which is a measure in TPAD.
Teacher Performance Appraisal and Development	This refers to a tool for measuring teacher's professionalism, professional learning community, professional knowledge and learning environment.

CHAPTER ONE

INTRODUCTION

1.1 Overview

This part entails the project's background, problem statement of the research. It also entails the intentions of the project, research queries, significance and justification of the investigation, scope and limitations of the study, delimitations of the study as well as study assumptions. This introduces the concepts relating to TPAD and student performance.

1.2 Background to the Study

Performance appraisal, according to Kagema and Irungu (2018), is the process of validating employees' performance in a specific task against a set of conditions or goals. It is the approach used to assess an employee's performance on an assigned task and determining their professional advancement (Moyal & Iyengar, 2016). Based on Gurr (2017), performance appraisal helps employees become more accountable and productive. Therefore, any organization must consider performance appraisal as fundamental aspect in order to achieve the desire goals (Prasad, 2015).

On human resourcing in schools, Sikawa (2020) concur that appraisal is a vital aspect of the corporate performance management system through which administration guarantees that tasks, responsibilities, and output are in alignment with the organization's priorities. The outputs of performance evaluation, if correctly handled, can provide an institution a competitive advantage over rivals. Performance appraisal in schooling has been used by governments throughout the world as a technique for determining educational outcomes in diverse educational systems.

According to TSC (2016), the appraisal process supports instructors in obtaining feedback and steering their career advancement by informing them of their strengths and flaws. The policy approach that is most likely to produce significant advances in students' learning and retention of information is to strengthen teacher performance through measurable data (TSC. 2016). If we are to maximize the talents and abilities of all of our young people, we have to provide good schools. The importance of competent teaching in every school reform program is acknowledged by researchers, with teachers playing a crucial role (Wilcox *et al*., 2016). In addition, the appraisal is utilized for administrative objectives such as rewarding and informing promotion judgments (Kagema & Irungu, 2018).

Globally, setting of performance expectations, assessment, work planning, competency assessment, values and monitoring, and end-of-year appraisal should all be part of a tutor's PAS program (Darling-Hammond, 2015). In Canada schools, teachers were constantly advanced and inspired to expand their tutoring quality. It spread to Asia and the concepts was adopted in Sri Lanka, Pakistan, Korea, India, China and Bangladesh. Later, Africa countries have also embraced it as well as U.S.A, United Kingdom among other nations (Welch, 2019). As per Stone, Cox and Gavin (2020) human resource management has incorporated the notion of performance appraisal, which has become a global tool in management of human resources, despite been implemented differently in different institutions around the globe.

In USA, Maverick educators as cited in Kwedho (2015), the administrators and elected officials came up with the idea of starting Teachers' Performance Appraisal and Development (TPAD) in the mid-1990s due to low performance in schools. Thus, Performance Contracting (PC) is well entrenched across various states and the school boards are the managers.

The intention of performance appraisal is to improve instructors' proficiency and, as a result, students' performance. Managers may use performance appraisal to ascertain training requirements, decide on promotions, transfer, and award employees.

In 2012 England put in place regulations to affect the regards of teacher standards, teacher appraisal and teacher capability (Julie, 2012). Appraisal was implemented to make sure that all instructors have the capabilities and expertise they need to do their jobs professionally. This makes it feasible for teachers to continue to enhance their professional practices and thrive as instructors. Further in the subsequent year in 2013 new arrangement came into effect concerning teachers' pay which was pay progression linked to performance for teachers. In this sense the governing body in the England education sector resumed the obligation to guarantee that the performance of instructors at its schools is reviewed and managed in harmony with the institutions regulation and the policy which is done annually. Head teachers are responsible for supervising teachers for appraisal (Setyaningsih & Suchyadi, 2021).

Performance Appraisal is also evident in Africa exemplified by Burkina Faso's strategic plan for 2017 – 2030 on educational development. The plan highlighted Teachers' Performance Appraisal and Development showed significant as well as other positive effects on learning (Kwedho, 2015). Ahmed et al., (2010) found that introduction of Performance Contracting (PC) in South Africa was to enhance delivery of services as well as change the mind-set of communal service away from a culture of viewing inward towards an improved culture of commercial as focused on client and outcome.

Many performance improvements initiatives were put in place in an effort to enhance services delivery. Aloo, Ajowi and Aloka (2017) establish that an excellent curriculum assessment ought to have an agent for implementation. The educator plays a vital obligation

in curriculum assessment by altering the curriculum into syllabus, schemes of work, and into classes that are delivered to students.

In Rwanda, Teachers' Performance Appraisal is adopted in the education sector and empirical studies have established impressive progress in the learning outcomes. There has been a continued gain in the students' performance as it has been observed across the years since the introduction of TPA programmes (Zeitlin, 2021).

In 1976, Uganda embraced the idea of performance appraisal as part of an administrative reform initiative to strengthen public sector performance (Karyaija, 2012). In the field of education, Kyakulumbye (2013) stated that the public-school appraisal system has culminated in the discovery of performance gaps and educator advancement needs. This was made feasible by assessing instructors' knowledge and experience, as well as teamwork, communication, and time management, and so aligning teaching staff with educational strategic goals. Teachers' Performance Appraisal aimed at enhancing students were taught with professional teacher who aims at improving performance of the students.

In Kenya, performance appraisal was initiated as part of a public-sector reform effort aimed at improving public services (Republic of Kenya, 2013). In 1964, it was incorporated in education as an inspectional evaluation system, allowing the minister of education to designate officials from the Ministry of Education to visit, audit, and report on the status of the school at any time, with or without announcement. This was done to see if the curriculum was adequately implemented and if the teachers were qualified professionals (Mwinyi & Orodho, 2014).

TSC and the British Council founded the Teacher Performance and Integrity (TPI) initiative in response to the ongoing need to improve educators' performance (Owuor & Jonyo, 2017). The introduction of Teacher Performance Appraisal and Development (TPAD) in 2014 that

was evaluated through a pilot study before being rolled out in January 2016 was made possible by this initiative, which facilitated the revision of the code of regulation for educators as well as the code of conduct and ethics.

In Kenya, TPAD is an uneven approach of appraising all public-academic institution educators irrespective of their areas. The tool which seeks to assess the teachers' professional knowledge, comprehensive learning environment, teachers' professionalism and professional learning community aspect in the teaching experience, is also supervised by the Teachers Service Commission (TSC) as the sole employer of tutors.

Through adopting TPAD teachers are able to improve in their conduct as well as performance which results to improvement of students' performance. This was to facilitate and gauge teacher advancement for enhanced educator performance (Kanika, 2022; Kagema & Irungu, 2018).

The TSC, in employing Teacher Performance Appraisal and Development, obligates principals of the school to examine and hand out reports of progress on the teachers' performance levels (Midimo, 2017). The Performance Contract (PC) and TPAD were the performance gears used to improve the tutoring and learning quality in public schools. Teachers enhance their professional knowledge and application through preparation of lesson plans, lesson notes and schemes of work, which translates in their instructional performance.

According to Dorothy and Bonn (2020), the modifications are purposely to construct a culture that is performance oriented and instil in public schools' accountability, while the Kenya National Union of teachers (KNUT) and her counterpart Kenya Union of Post Primary Education (KUPPET) were strongly opposing the policy as an ill move to frustrate the teachers. Dorothy and Bonn (2017) further state that the Teacher Service Commission yearly report 2015–2016, Performance Appraisal and Performance Contracting System are portion

of broader public sector reforms intended at strengthening efficiency and effectiveness geared towards achieving the objectives of the commission.

Performance Contracting and TPAD tool to observe the conduct and the performance of teacher as provided in the performance management in section (11) (f) of Teachers' Service Commission Act and code of regulation section 52 (Dorothy & Bonn, 2020). Teachers' creativity and innovation is an effective element for the mastery of the content. Atieno (2014), effective teaching and learning needs teachers to effectively innovate and improvise locally available resources as learning aids which lead TSC developing TPAD that would enhance innovativeness.

Professional learning community approach is an area of interest in implementation of TPAD. Professional learning community have been associated with development of positive attitude as well as participation of students and teacher in learning activity (Intanam & Wongwanich, 2014).

In Kenya the TPAD was developed to evaluate professional development, promotion of co-curricular activities, safety, learner protection, creativity and innovation in educating, management of time, professional knowledge and application as well as maintaining teaching progress and lesson attendance (Ngeno, Bett, & Cheruiyot, 2013).

In this case the students are provided with appropriate teaching material, taught efficiently and effectively. One of TPAD's objectives is to provide quality education to learners in all public institutions. Hence the need for the current investigation of professional knowledge, comprehensive learning environment, teachers' professionalism and professional learning community as part of TPAD indicator on students' academic performance.

Professional knowledge is an important part of teaching which is crucial in ensuring effective learning and student outcome (Hill and Chin, 2018).

Zhaohui and Anning (2020) building students' engagement, classroom management, conflict management, benchmarking other universities, individual and collaborative research, education conferences and seminas, reading professional literature as well as courses and workshops. Professional development programmes lead to improvement of academic performance as mediated by professional knowledge as found by Osei-Owusu (2022). This professional knowledge plays an important role professional development programmes. Where demostrate mastery, prepare professional documents, learners assessment and lesson observation were used to measure professional knowledge in TPAD.

TPAD also measure comprehensive learning environment based on the plan activities, stimulate classroom, learner safety and manage learner conduct. According to Usman and Madudili (2019) pointed that school administrative efficacy, teaching process and quality of teachers are among impeding learning progress. Personal relevance, autonomy and understanding of teacher's in managing classroom learning environment.

Teachers' professionalism entails adherence ethical standards, observe punctuality, timely syllabus coverage, legal and professional requirement and student's performance.

Teachers' professionalism is an important part of ensuring the right conduct of the teacher is attained (Dimkpa, 2015). Motivation, discipline, instructional resources, guidance, teaching style, communication, quality/qualification and dressing of the teacher might affect positive or negative impact on academic performance.

Finally, professional learning community as part of TPAD indicator on students' performance in academic take part a fundamental role in ensuring there exist collaboration of teachers, parents, community and student to ensure that student perform. Ratts, Archibald, Andrews, Ballard and Lowney (2015) pointed that learning technique that enhance collaboration influence student performance. Professional learning community members were found to

collaboratively reviewed student work, operated with colleagues to examine work quality of a scholar, provided feedback on instructional practices and observed peers.

In 2018, Kenya National Union of Teachers (KNUT) and Kenya Union of Post Primary Education Teachers (KUPPET) challenged the embracing of the new teachers' performance appraisal strategies on the basis of the tool as victimization for teachers (Joseph, Kahuthia, & Gakenia, 2020). It was also claimed that it does not meet the expectations of improving teachers' commitment to their work and quality education since the tutor's appraisal is more of error finding than advisory. This implicates a negative image on the appraised (teachers) side in achieving the students' performance.

Table 1.1: Trans Mara East Sub-County KCSE results

	2018	2019	2020	2021
KCSE Mean Score	5.3	5.1	-	5.0

In addition, the performances of students in Trans Mara East Sub-County have been declining despite the schools implementing TPAD (Mutai, 2021). Therefore, there is need to examined TPAD on students' academic performance.

1.3 Statement of the Problem

Teacher Performance Appraisal and Development is perceived to have an effective impact of teacher performance as a tool to determine educational outcome. Human resource development through transformation of attitudes, skill and knowledge development is linked with teaching profession. Effort of finding solutions to poor performance goes a long way in enhancing child's development, career development and enhancing human labor. Hence, for school to enhance performance it is essential for administration to ensure efficient performance appraisal. TPAD evaluates professional knowledge, comprehensive learning

environment, teachers' professionalism and professional learning community which are responsible for efficient teaching and learning.

In an era of accountability and transparency, customers in educational institutions need accountability for the resources they spend in education because these resources are scarce. Despite the value of teacher appraisal, some believe that it fails to live up to expectation of improving teaching quality, which is subsequently manifested in higher educational standards, due to the way it is administered. Since, the introduction of performance appraisal in public secondary schools in Kenya, teachers together with the teacher unions have had a lot of complains about spending too much time preparing the performance appraisal documents at the expense of teaching which to them, is the most important aspect. They have even doubted whether the performance appraisal itself can translate to having better results in schools yet one of its objectives is to provide quality education to learners in all public institutions.

It is against this backdrop that the researcher asked questions that begged for answers hence the conceptualization of this study. The reality is that despite the existence of teacher performance appraisal in Kenyan public schools, questions still arise on its applicability, reliability and validity in improving the performance in the schools. Despite, Teacher Performance Appraisal and Development (TPAD) been applied in Trans Mara East Sub-County, the county has been registering declining students' performance. Hence, it is not clear whether Teacher Performance Appraisal and Development has affected student's performance in public secondary schools. As a result, this research sought to investigate the influence of Teacher Performance Appraisal and Development (TPAD) on student's academic performance in public secondary schools in Trans Mara East Sub-County.

1.4 Purpose of the Study

The main purpose of this study was to examine the influence of teacher performance appraisal and development on students' academic performance in Public Secondary Schools in Trans Mara East Sub-County, Kenya.

1.5 Objectives of the Study

The objectives of the investigation were to: -

i.) Assess the influence of teachers' professional knowledge on the academic performance of students in public secondary schools in Trans Mara East Sub-County.

ii.) Establish the influence of comprehensive learning environment on the academic performance of students in public secondary schools in Trans Mara East Sub-County.

iii.) Determine the influence of teachers' professionalism on the academic performance of students in public secondary schools in Trans Mara East Sub-County.

iv.) Examine the influence of professional learning community on the academic performance of students in public secondary schools in Trans Mara East Sub-County.

1.6 Research Hypotheses

The research hypotheses were tested using 5% significant level as follows: -

H_{01}: Teacher professional knowledge has no statistical significant influence on the academic performance of students in public secondary schools in Trans Mara East Sub-County.

H_{02}: Comprehensive learning environment has no statistical significant influence on academic performance of students in public secondary schools in Trans Mara East Sub-County.

H_{03}: Teacher professionalism has no statistical significant influence on academic performance of students in public secondary schools in Trans Mara East Sub- County.

H_{04}: Professional learning community has no statistical significant influence on academic performance of students in public secondary schools in Trans Mara East Sub- County.

1.7 Significance of the Study

The research would provide useful practical information to Teacher's Service Commission with necessary recommendation. This would assist in evaluating the outcome of implementation of TPAD on the educational performance of students in public secondary schools in Trans Mara East Sub-County and generalized to other regions in the country. This would assist in development of appropriate policies and procedures that would improve the teacher appraisal. The findings would help the Teacher Management Directorate to enrich the quality of education in public secondary in Kenya. The results may help Teacher Service Commission (TSC) to boost the Kenya secondary school's education quality through enhancing the efficiency of performance appraisal system.

Principals in public secondary would use the findings of the study to understand the strengths and weaknesses of the present appraisal process and how to make it effective for improved performance of the students. Discoveries from the investigation may be valuable to teachers in understanding TPAD benefits and how it assists in improving students' performance. The study may also contribute to new knowledge about TPAD for further exploration by educational students. The findings would be used by researchers and students in further research and bridging the research gap.

1.8 Justification for the Study

Human resource development through transformation of attitudes, skill and knowledge development is linked with teaching profession. Effort of finding solutions to poor performance goes a long way in enhancing child's development, career development and enhancing human labor. Hence, for school to enhance performance it is essential for administration to ensure efficient performance appraisal. TPAD evaluates professional knowledge, comprehensive learning environment, teachers' professionalism and professional

learning community which are responsible for efficient teaching and learning. In an era of accountability and transparency, customers in educational institutions need accountability for the resources they spend in education because these resources are scarce.

Trans Mara East Sub-County have indicated a continuous decline in their KCSE performance since 2018 with a mean of 5.3 to 2021 with a mean of 5.0. Despite, the introduction of TPAD there is no evidence of improvement in performance of the students. However, the tool is expected to improve teachers' skills, efficiency and conduct in teaching students which contribute the improved performance of teachers. Research done examined the TPAD in relation to the performance of teachers. Therefore, there is a need to examine the influence of TPAD on academic performance of students.

1.9 Scope of the Study

The conceptual scope of this investigation was to investigate the influence of implementation of TPAD on students' academic performance in public secondary schools in Trans Mara East Sub-County. This specifically sought to establish the influence of professional knowledge, comprehensive learning environment, teachers' professionalism and professional learning community towards students' performance of students' academic in public secondary.

The study's geographical scope was in Trans Mara East Sub-County, Narok County where public secondary schools were targeted. It focused on the TSC Sub-County director, principals and teachers of the secondary schools employed by Teachers Service Commission. Private schools were not involved in the study since their teachers are not employed by the Teachers service commission. The information pertained the implementation of TPAD within the period of 2018 to 2021 based on time scope for the research. However, the research was done within the period 2021 to 2022.

1.10 Limitations of the Study

The study was limited by the fact that it was self-administered questionnaire from tutors themselves. This infers that some tutors could exaggerate the result of TPAD. Further, because of the sensitivity of the matter under study, the respondents choose to provide positive information to please the researcher failing to give accurate information on the situation of the TPAD, to mitigate this, the researcher will remind the respondents that study is purely academic and whatever information given will be treated with confidentiality it deserved. In addition, the investigator requested the participants to provide correct information as well as use the TPAD information to corroborate the data collected.

1.11 Assumptions of the Study

This research was done on the following assumptions:

i.) That TPAD has been implemented in all public secondary schools irrespective of the challenges since its introduction in 2014.

ii.) Since all public secondary schools have Teachers Service Commission employed teachers, they all are subject to the signing of TPAD forms.

iii.) That all selected schools, teachers, and sub county director of education will accept to be part of the study.

iv.) That the time schedule for the study will be attained in that there may be no unforeseen circumstances like Covid-19 that will interfere with the schedule especially movement to and fro field for data collection.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This segment highlights the notion of professional understanding, comprehensive learning environment, teachers' professionalism, and professional learning community and students' academic performance. It also presents the conceptual and theoretical framework and a summary of the research gaps.

2.2 Concept of Performance Appraisal and Student Academic Performance

Performance appraisal, according to Moyal and Iyengar (2016), is the framework for assessing an employee's performance on an assigned purpose and evaluating their professional advancement. Performance appraisal is a mechanism of reviewing employees' efficiency with the intention of discovering and rectifying performance gaps. When implemented correctly, an assessment tool may drive staff to enhance their productivity. As per Gurr (2017), performance appraisal enables workers become more accountable and productive. This improves transparency and effectiveness in the work place. Any organization's performance appraisal is fundamental (Prasad, 2015). Performance appraisal, as per Kagema and Irungu (2018), is a way of evaluating workers' job performance in connection to the job's expectations.

According to Sudin (2011), one of the most prevalent strategies for evaluating staff's performance versus intended outcomes is performance appraisal. According to the researcher, many industrial and government companies have adopted performance appraisal because they recognize that a worker's productivity, or lack thereof, may decide an organization's success or failure.

It is a process that is supposed to help workers learn about organizational norms and accept (Lin & Kellough, 2019). An essential factor of performance system is that it can analyze an area that requires change and allow for solutions which would improve performance (Chouhan *et al*., 2016; Fryer *et al*., 2009). As per DeNisi and Murphy (2017), performance appraisals are essential when managers intend to make decisions like promoting worthy workforce or recruiting new staff. Performance gives feedback so that workers' work output may be enhanced, and it also analyses their performance so that they can be rewarded or penalized.

In Kenya Performance Appraisal in education focuses on aspects that develop and evaluate performance: training needs, innovation and creativity, professionalism, time management, learners' protection, professional advancement and co-operation with stakeholders and parents (Neema-Abooki, 2022). These mentioned aspects are instrumental in the education sector as they are used in career development, professional learning, feedback, career progression, promotion or demotions as well as termination purposes. Through improving implementation of performance appraisal system with the government providing training and supply enough resources to implementers, enhance feedback system and strength monitoring including supervision at all implementation levels (Mathias, 2015).

Educators' performance is the method of reviewing their performance against predetermined goals (Dessler, 2008). The information gathered is then used to determine the degree of performance of the instructors, as well as the need for in-service training and prospective deployment. Stronge (2010) pointed that effective teacher provides excellent teaching and learning for students. Quality of the teaching affected students’ achievement as indicated by Shaaban and Reda (2021). According to Muli (2011), correctly done performance assessment has the ability to immediately affect the attitude and behaviour of instructors' performance, as well as the learning outcomes of students.

The school administration is responsible for the performance of the schools and its personality. The head teacher should ensure that, through his communication, all stakeholders work together to support a common cause.

Teacher performance appraisal and development was developed to ensure that students achieve through evaluation of the teacher in seven main areas. These are professional development, promotion of co-curricular activities, safety, learner protection, creativity and innovation in instructing, management of time, professional knowledge and application as well as maintaining teaching progress and lesson attendance (Mutai, 2021). This study explored the effect of teacher performance appraisal in Kenya on students' academic performance in public secondary schools in Trans Mara East Sub-County, Kenya.

2.2.1 Professional Knowledge and Students' Performance

Professional knowledge of the teacher take part of fundamental obligation in strengthening the performance of the students. Demonstrate mastery, prepare professional documents, learners assessment and lesson observation are part of important practices of a professional knowledge of a teacher. According to Mahulae, Lumbanraja and Siahaan (2020) professional knowledge of the teacher relates to the competence of the teacher which assist in improving learners achievement. Its one of TPAD indicators that relates directly to development of the students as well as learning process.

Teachers' knowledge and instruction was assessed by Hill and Chin (2018) on achievement outcomes. Students and professional standards which identify knowledge of students play a crucial role in promoting effective student learning and instruction. This exploration was founded on a surveying tutors where evidence from 284 respondents was used. However, there was evidences that concepts are responsive to accurate measurement and such knowledge related with instruction and student outcome.

However, knowledge of students misconceptions remain to be difficult to measure. The current study will examined teacher's profession as Teacher's performance appraisal development indicator on students' performance.

Marika, Jagero and Gitari (2021) examined the outcome of tutor professional understanding on delivery service which was done in Kitui County public secondary schools. Teacher Service Commission implemented Teacher Performance Appraisal and Development (TPAD) as means of improving service delivery in secondary schools. However there are evidence that teachers are not involved in co-curricular activities, inadequate of preparedness in teaching content and missing lessons. Hence raising concern on purpose of improving student performance. Linear regression was selected to analyze association between variables. The findings diclosed that there existed noteworthy association between instructors' professional knowledge and service delivery. However, the current study examined the role of teacher's progessional knowledge in performance of the students as a measure in TPAD.

Zhaohui and Anning (2020), examined the effect of educators' professional advancement on student's academic performance in higher learning. A sample of 298 teachers were given survey questionaires. This was analyzed using structural equation model and confirmatory factor analysis.

It was established that instructors in Jiangsu University were interested building students' engagement, classroom management, conflict management, benchmarking other universities, individual and collaborative research, education conferences and seminas, reading professional literature as well as courses and workshops. Teacher instructional methods and ability has been enhanced through profession development done within three years. Low employer's supports and conflict interest between profession development and work schedule were impediment to participation of teacher in profession development programs. The current study used regression analysis rather than structure equation modelling.

Mahulae, Lumbanraja and Siahaan (2020) investigated on impact of competence and professionalism of educators on the performance of teacher in relation to outcome of student learning achievement. A case study of Harapan Mandiri college in Medan which is a private university with high student achievement. Descriptive explanatory research design that adopted quantitative method where census of 95 teachers were used. Results indicated that professionalism and competence had positive important effect on the teacher performance. Teacher performance had a positive significant outcome on the students performance, hence, teachers' performance acted as a partial mediator of both professionalism and competence on the performance of the student. The current study was done in secondary schools rather than university institutions.

According to Lu, Loyalka, Shi and Chang (2017) investigated the outcome of educator professional advancement programs on success of students in China rural areas. The study utilized 3066 students and 84 teachers from West provice of China. The results indicated that National Teacher Training Program had no significant outcome on academic performance of students. However, the program had positive efect on mathematics teaching knowledge of the teacher but not teaching practices in the class. Therefore, the programme assist inproving teaching knowledge but is not translated in improving teaching practice nor student learning. The current study was done in Kenya which has different education system from China.

The impact of professional development programmes was examined by Osei-Owusu (2022) on the relationship between teacher's knowledge and academic performance. Senior high school 4,103 teachers were surveyed across North, Middle and Southern belt of Ghana. Findings revealed that professional development had positive statistical relationship with professional knowledge. Similarly, both professional development and professional knowledge had positive statistical relationship with academic performance.

Hence professional knowledge had partial mediating effect on the relationship between progressional development and academic performance. The study concludes that professional development had impact of student academic performance through professional knowledge of the teacher. The study suggested that teachers should engage in professionally develop programmes that would imporve there professional competencies. The current study examine teacher's profession knowledge in relation with student's academic performance.

2.2.2 Comprehensive Learning Environment and Student Performance

Learning environment relates to how the teacher plan activities, stimulate classroom, ensure learner safety and manage learners conduct in the school. Usman and Madudili (2019) pointed out that learning environment should be comprehensive to enable school administrative efficacy, learning process, safety and teaching process that is healthy for the learners. Hence, the learning environment should be conducive for a healthy competition of students. The current study will colelct primary data rather than empirical review of literature of comprehensive learning environment.

Learning environment chacteristics were measured against engagement in academic activities by Opdenakker and Minnaert (2011). The study was based on 777 grade 6 students who were examined in 41 learning environment. Learning evironment perspective and academic engagement were observation and feedback assisted in the questionnaires. Factor analysis was conducted where there existed three factors whereas the current study adopted regression analysis in obtaining the required results.

Usman and Madudili (2019) evaluated of the influence of environment in learning on educational performance of students in Nigeria. Trend of poor academic performance of Nigeria had raised a question of the role of learning environment in improving students' performance.

Apathetic attitude of students, school administrative efficacy, teaching process and quality of teachers are among impeding learning progress. Findings have indicated both positive and negative contribution of academic achievement of student. The results indicated that learning environment has an important role crucial to teachers, students and school administrator in achieving academic performance.

Malik and Rizvi (2018) assessed classroom learning environment on students' academic success in Mathematics. The examination obtained respondents from both secondary and higher secondary Pakistan schools. ANOVA, Pearson Corelation and multiple regression model was used in analysis. According to the findings, autonomy and investigation subscale had negative effect on student achivement while emphasis on understanding, personal relevance and involvement subscale contributed to classroom learning environment.

Golob (2012) researched teachers' professional development on national pupils' knowledge assessment. Quality of education has been assessed through pupils' achievement all over the world. However, national assessment of knowledge has been declining in Slovenian pupils. In order to understand teachers' professional development was evaluated on the effect to pupils results in Mathematic and mother tongue knowledge assessment. The findings revealed that Management approach in enhancing teachers' professional development in school results into best National Assessment of Knowledge.

2.2.3 Teachers' Professionalism and Student's Performance

Continuous career growth and development, professional gaps and professional development plan remain crucial teachers' professionalism aspect in TPAD. It also involve the conduct of the teacher according to Dimkpa (2015) which include dressing, qualification, communication, motivation, discipline, teaching style, guidance and instructional resources.

Professionalism of the teacher also affected knowledge and understanding (Zakaria, Nor and Alias, 2021).

Dimkpa (2015) did a research on teachers' conduct in 21st century which was examined on student's academic performance. The intention of the proposal was to inspect professionalism and conduct of the teacher on student's achievement. Motivation, discipline, instructional resources, guidance, teaching style, communication, quality/qualification and dressing of the teacher might affect positive or negative impact on academic performance. The paper recommended for emphasize on the use of student centered learning.

Teachers' professionalism was examined by Zakaria, Nor and Alias (2021) on the success of the student. The study was done in 85 high schools where 374 sample respondents were involved in Malaysia. The findings revealed that high teachers' professionalism resulted to high success of the student. Knowledge and understanding as part of professionalism had the leading effect on students' success. Hence, the study concluded that there existing signicant effect of teachers' professionalism on students' success.

Chukwuemeka *et al*., (2020) examined educators' professional ethics and classroom administration on performance in academic of students. 920 sample students from public high school in Nigeria were used in the study. It was found that classroom management and professional ethics had noteworthy impact on academic performance of students. Therefore, recommended that schools and government should conduct conferences, seminars and workshops to establish awareness on classroom and ethics management for teachers in order to enhance students' academic performance in Nigeria.

Alamgir, Salahuddin and Manzoor (2017) teaching professionalism was examined on academic achievements of students. The study used desk review of literature. The finding revealed that communication skills, managerial skills, knowledge and personality shaped

profession attitude which had a significant effect on development and academic performance of the students.

2.2.4 Professional Learning Community and student performance

Professional learning community links collaborate with colleagues, parents and communities. Collaborative strategies between teacher and students, working with colleagues to judge quality of work done and standardization assessment take part and vital role in professional academic community (Ratts, Archibald, Andrews, Ballard and Lowney, 2015).

Intanam and Wongwanich (2014), examined the professional academic community application approach to establishing the learning methodology and improving academic success. Professional learning community approach assist teachers be responsible in tranferring, creating and acquring knowledge to students. The examination applied both quantitative and qualitative research to extract primary information from teachers, head of academic affires and administrators of education institution. This was based on a case study of a primary learning establishments. The findings revealed that teachers adopted research-based teaching technique. There was active participation and positive attitude of learner and teacher in learning activities. As result the learners were able to develop academic knowledge and skills in science and mathematics. Therefore, the current study identify that there is need for examination on the role of participation in profession in professional learning community affect performance of the students.

Attributes of professional learning community of primary school was investigated by Sroinam (2018). The study was done in Udon Thani Province where 367 teachers and 265 school administration. Data was collected using questionnaires where mean, standard deviation, paired different test by Scheffe's method, ANOVA and t-test were used in

analysis. The findings showed that characteristics of professional learning community assist in advancing primary school.

Ratts, Archibald, Andrews, Ballard and Lowney (2015) investigated outcome of professional learning communities on scholars success in elementary academic instituions. The learning technique has been used to improve collaboration and enhance public teaching practices. Hence, the study aimed to examining whether profession learning communities practices influence on the performance of students. Quantitative design was used where a survey of 194 teachers and 4 years secondary data were used for descriptive and inferential data analysis. Professional learning community members were found to collaboratively reviewed student work, worked with acquitances to judge scholar work quality, provided feedback on instructional practices and observed peers. Student-centered learning, working with colleagues to judge quality of work done, collaborative review student work and standardized assessment.

Professional development methods were investigated by Karamanos (2020) on student performance in Mathematics. A quantitative study survey was done which examined online survey of school level administrators which represented 11.4% public school across New Jersey Department of Education. Regression analysis was applied to examine the research queries. According to the findings revealed that the content delivered by the decision makers were more significant in improving professional development on student academic performance compared to the methods provided.

2.3 Theoretical Framework

The study used goal setting theory and Feedback intervention theory (FIT).

2.3.1 Goal Setting Theory

Edwin Locke postulated this hypothesis in 1968. The theory emphasizes the need of defining precise, clear, and challenging goals, as well as providing necessary feedback and including staff in the development of organizational priorities (Locke & Latham, 2019).

It asserts that these concepts are vital in inspiring workers to attain greater levels of performance, and it emphasizes that objectives established by employees tend to encourage them to achieve higher levels of performance. Goals are vital in offering guidance to a staff about what has to be done and the dedication required, according to the notion, which increases productivity (Van-Den-Broeck, Carpini, & Diefendorff, 2019). In the context of TPAD, it acts as a tool for setting goals as well as appraising teachers through setting appropriate goals on academic performance of the student.

This model recommends the termly appraisal system where every staff member is expected to report on the progress of work by filling up termly work of the task designated earlier as agreed in the term. At the completion of the term, the work plan is applied to evaluate the performance of the staff for the whole term. The idea underscores the benefit of workers' (teachers) involvement in establishing goals as well as improvement of student performance. Consequently, contribution in initiating goals promotes inspiration of teachers to complete work efficiently and fast, and results to better yield by levitation of effort, feedback and enthusiasm quality (Islami & Mulolli, 2018). Critic of the theory points the dependency on feedback quality rather than proactive ability of the teacher. Hence, goals set sometime are not achieved leading to failure of an appraisal system to correct poor performance. There is a need for school to develop policies that assist in active utilization of the feedback. This includes reward system for performance achieved, training for poor achievers and motivation for achievers.

Employee behaviour is directed by better and suitable feedback on results, which leads to higher performance than when feedback is not provided. Goal-setting participation also makes main objective more acceptable to both workers and employers in corporations (Owuor & Jonyo, 2017).

Goal setting theory's notions are correlated to the variables in the present investigation in certain ways. Goal setting theory, for example, stresses feedback and target setting as elements that impact organization goal attainment.

The theory is therefore appropriate to this study since the Teacher Performance Appraisal and Development tool has been used by the teachers' employer, Teacher Service Commission (TSC) to set targets for students' academic performance.

2.3.2 Feedback Intervention Theory

Avraham Kluger and Angelo DeNisi introduced the Feedback Intervention Theory (FIT) in 1996 to explain why feedback isn't always beneficial in enhancing subsequent performance (Schleicher, et al., 2018). Because feedback is such an essential component of many school curricula and interventions, it's mandatory to understand more about how it influences future performance. This study outlines the genesis of FIT before delving into the chief factors for understanding feedback effects and how the three self-affect feedback perspectives interact (Frey, 2018). Hence there is an assumption that the feedback can only improve the performance if it is assumed that it does not affect self-esteem. This implies that perceived accuracy of the feedback is based on the appraise acceptance and cooperation which mainly affect performance appraisal tool.

Performance management (PM) is responsible for initializing performance assessment in an organization. A question raised about the notion of true performance and if performance management indicator can be used to signal performance early and initialize real-

time response to correct the problem (Pulakos, Mueller-Hanson, & Arad, 2019). TPAD is a performance appraisal whose feedback is necessary in signalling performance of the students. However, the theory proposes that when teachers are subject to performance appraisal, they tend to modify their behaviour which might not reflect the true performance.

The theory explains only the link between performance management and performance of teacher but not explain how these can be utilized to transform to the performance of student who are the secondary target for TPAD.

This theory therefore, not only supports performance management but also explain how the feedback can adopt to ensure high performance of teacher. The theory can be used to explain the improvement of students since performing students is associated with performing teachers.

2.4 Conceptual framework

This conceptual framework is derived from the evidence that performance appraisal is aimed at improving students' academic performance in school. It describes the connection between both the dependent and independent variables as shown in Figure 2.1.

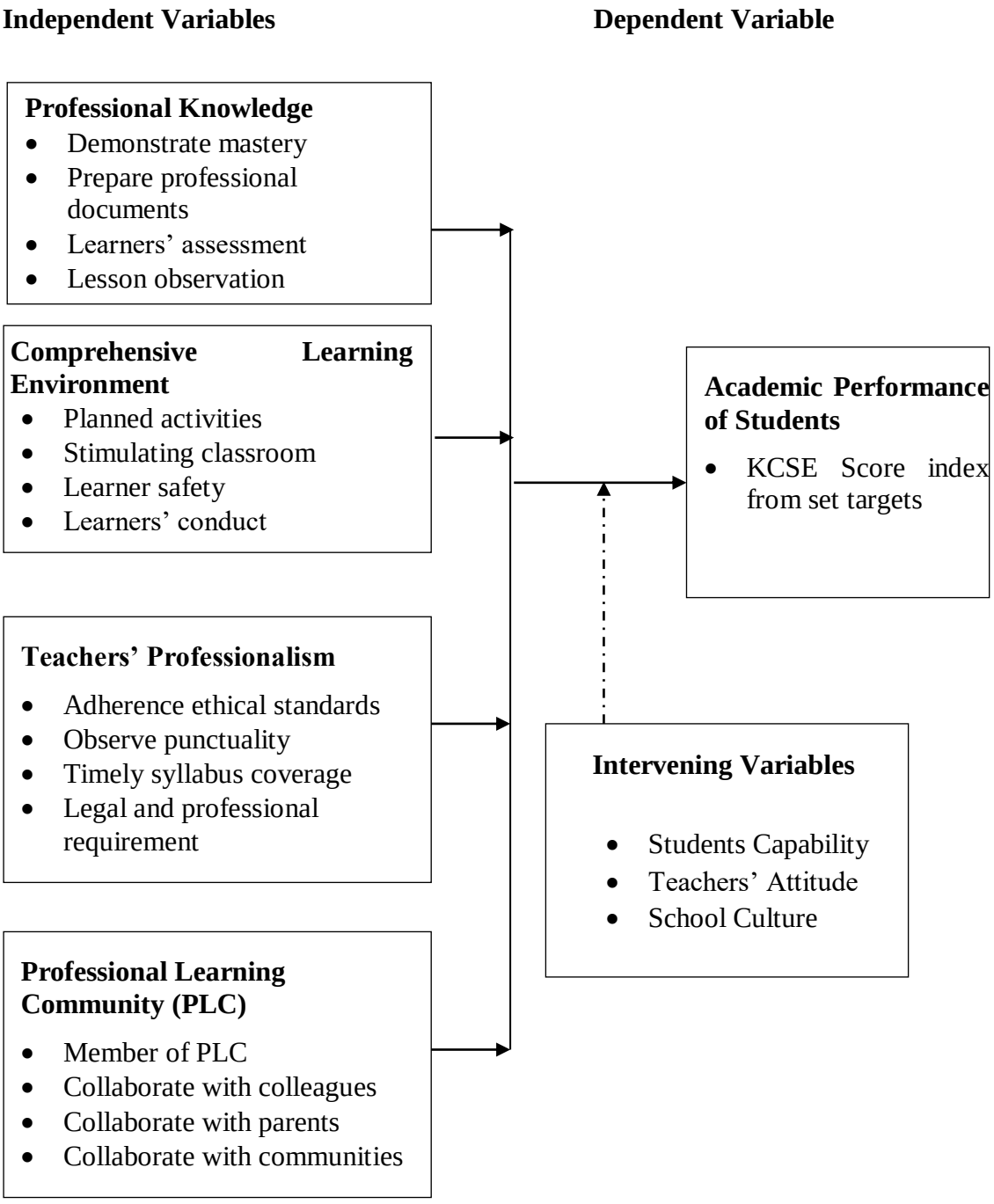


Figure 2.1: Conceptual Framework

Source: Adapted and improve from TPAD (Sunter, Ndaita & Areba, 2022)

In the conceptual framework, the independent variable is represented by TPAD implementation measured using professional knowledge, comprehensive learning environment, teachers' professionalism and professional learning community. Dependent variable is academic performance of students which was evaluated using score index from set target which is a ratio of mean of score of end term exam against means score that were targeted. Therefore, student's academic performance was measured based on the ratio of student performance score and target performance. Intervening variables were student capability, teachers' attitude and school culture. Students' capability, teachers' attitude and school culture were controlled through collecting information using randomized sampling from selected public secondary school within Trans Mara East Sub-County.

2.5 Identification of Knowledge Gap

Much of the literature reviewed through cognisant of the importance of performance appraisal have different perspectives from the current study. A study by Bhurtel and Adhikari (2016) on supervisors' perspectives of performance appraisal in correlation to employee development was conducted in Nepal Technical Schools which presents a contextual gap. The inspection in the study also presented conceptual gaps since it did not focus on the same variables which the current study focuses on; professional knowledge, comprehensive learning environment, teachers' professionalism and professional learning community. Though Ng'aruni, (2019) conducted a study on the outcome of institutional practices on appropriate implementation of teacher performance appraisal it's focus was on Public Primary Schools in Tharaka Nithi County and therefore presented conceptual gaps on various variables in the present investigation.

Furthermore, a survey by Okech (2017) on the influence of performance contracting on effectiveness in public service delivery argued that political meddling plays a vital role in performance contracting implementation.

The current study focused on students' performance in public secondary schools. A study by Osei-Owusu (2022) dealt on professional knowledge as mediator on the relationship between professional development and academic performance of students.

The current study focused on TPAD in terms of teachers' professional knowledge, teacher's professionalism, comprehensive learning environment and professional learning environment.

Intanam and Wongwanich (2014) explored the outcome of professional learning community but focused on performance of mathematics and science in primary schools. A study done in China by Zhaohui and Anning (2020) focused on student's academic peformance in higher education. Quantitative study by Karamanos (2020) examined professional development on students' performance. Sroinam (2018) used paired different test by Scheffe's method, ANOVA and t-test.

Nonetheless, few studies have been conducted in any of Kenya's county governments to completely examine the influence of teacher performance appraisal and development (TPAD) on students' academic achievement in public secondary schools. This study aims to bridge this knowledge gap by focusing into the influence of teacher performance appraisal and development (TPAD) on students' academic achievement in the Trans Mara East Sub-County of Narok County, Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research strategy and technique that were employed in this study are described in this chapter, as well as the project's blueprint. The study's research method, target population, sample size and sampling procedures, research instruments, validity and reliability of research instruments, process of data acquirement, data analysis methodologies, and ethical issues in conducting the study.

3.2 Research Design

Research design as per Sekaran and Bougie (2016) is finding relevance to the drive of the investigation through the conditioning of facts collection and evaluation. It illustrates the path taken for data collection, measurement and analysis (Abbott & McKinney, 2013). Correlation and descriptive designs were used. Correlation was deployed to help in identifying the relationship between variables. As per Creswell (2014) mixed methods research allows a researcher to collect and analyse both qualitative and quantitative information in a single study so as to comprehend an examined problem. This study utilized a descriptive survey research designs as it sought to adopt both qualitative and quantitative approaches to investigate the influence of teacher performance appraisal and development on students' academic performance in public secondary schools in Trans Mara East Sub-County. Descriptive design is appropriate when adopting mixed methods that are quantitative and qualitative in approach.

This design is appropriate for this inspection since it enables the investigator to obtain well organized knowledge on the influence of independent on dependent variables. It assist in

addressing the question who, what, where, when and how but does not address why in the research problem (Creswell & Creswell, 2017).

3.3 Study Location

The research was carried out in Public Secondary Schools in Trans Mara East Sub County, Narok County because the area experiences a declining trend in KCSE academic performance even with the compliance of tutors in conducting teacher performance appraisal as specified by TSC. Trans-Mara East sub-County is one of Narok County's five former Trans-Mara District sub-counties. It is bordered on the north by Bomet County, on the northwest by Nyamira and Kisii counties, on the west by Trans-Mara West, and on the east and south by Narok West (Simotwo *et al.*, 2014). Transmara East Sub County is located between the latitudes of 0° 50′ and 6° 50′ south and the longitudes of 34° 35′ and 35° 14′ east, with a mean altitude of 1450 m above sea level and an area of 320.5 km^2. It is split into four administrative wards: Ilkerin, Kapsasian, Mogondo, and Ololmasani (Appendix VII).

The sub-county now has 34 public secondary schools, comprising of boys' and girls' boarding schools, as well as mixed and mixed day secondary schools, with 34 principals. It has a total of 276 teaching staff, 242 of whom are hired by the Teachers Service Commission (Transmara East sub-county education office, 2021). Transmara East sub-county is marginalized part of Narok county with challenges in academic performance of students hence, remain to be suitable for the current research.

3.4 Target Population

Taherdoost (2016) argued that a population is a whole set of cases, individuals, or subjects with shared observable attributes. Dahabreh and Hernán (2019) observed that a population target is a big population from which sample are drawn from them.

The target population comprises of, the 34 principals and 242 teachers employed by TSC from the 34 public secondary schools in Transmara East Sub- County and 1 TSC sub-county director making the population be 277.

3.5 Sample Size and Sampling Techniques

Kothari (2004) pointed out that stratified sampling helps the analyst to have acceptable representations of multiple study participant categories. The principals, teachers and TSC sub-county director are appropriate respondent since they are the key as appraiser, appraisee and supervisor of the TPAD respectively. The principals and teachers were stratified into type of school which are extra-county, county and sub-county there being no National school in the region. Simple random method of sampling was employed to choose each member from the stratum to give equal representation from the target population and independent opportunity of being involved in the study (Ahunja, 2014; Best & Khan, 2002; Masuku & Sing, 2014). However, county TSC was chosen using purposive sampling since at county level.

As per Creswell (2014) a sample is necessary for a large target population which must be selected using randomization to ensure equal unbiased representation of all elements. Sample size was obtained scientifically from a population target of 277 participants. The size sample was calculated using Yamane formula (Tejada & Punzalan, 2012). The formula is given as;

$$n = \frac{N}{1 + Ne^2}$$

Where:

n = sample size

N= population size which is 277 respondents

e = margin error which is 5%.

$$n = \frac{277}{1 + 277 \times 0.05^2}$$

Therefore;

= 164 respondents

Participating schools were chosen using stratified random selection. The researcher used stratified sample strategy to ensure that each type of school is adequately represented. The summary is represented as follows in Table 3.1.

Table 3.1: Sampling Grid

Stratus	**Targeted Schools**	**Principal**		**Teachers**		**County TSC**	
Type of Schools	**Number**	**N**	**n**	**N**	**n**	**N**	**n**
Extra-County	1	1	1	17	10	0	0
County	12	12	7	105	62	1	1
Sub-County	21	21	12	120	71	0	0
Total Number	34	34	20	242	143	1	1

Source: Trans Mara East Sub-County Education Office, (2023)

3.6 Data Collection Instruments

The data was obtained by use of questionnaires, interview schedule and checklist. The questionnaires provided quantitative data that were used to test the influence of TPAD on students' academic performance. However, questionnaires were supported by interview schedule which provided qualitative information that provided in-depth understanding. The sampled teachers filled in the questionnaires whereas interviews were administered to Principals and TSC Sub-County director. Checklist provided other information that cannot be accessed from TPAD but obtained from the school administration records.

3.6.1 Questionnaire

The researcher developed questionnaire to enable the acquisition of crucial information. Teacher's questionnaires were administered to respective respondents (Appendix II). According to Zohrabi (2013), questionnaires are written instruments that provide participants with a set of questions or statements to which they must respond, either by writing their own responses or choosing from a list of pre-prepared answers. These are appropriate to collect data on a huge scale in the least amount of time. Therefore, this data gathering tool is preferred because it enabled the researcher to gather facts from a greater number of participants within some restricted time during which the study was conducted. Respondents also feel free to provide open answers to sensitive queries especially if they are not mandatory to reveal their identity (Hagan, 2014).

The examination adopted closed-ended questionnaires using Likert five-point scale based on research objectives. The Likert scale enabled the variables to adopt for both inferential and descriptive statistics analysis. The questionnaires were self-administered so that it enabled the researcher collect larger quantity of data in a least time period. Creswell (2014) advocated questionnaires as an ideal tool to acquire data since it enables efficient, faster, and convenient

acquisition of data. The questionnaire for teachers had two sections. Section 'A' had questions on background information while Section 'B' had questions regarding the influence of professional knowledge, comprehensive learning environment, teacher's professionalism and professional learning community on students' academic performance in public secondary schools in Transmara East Sub-County.

The Five-point Likert scale was employed to measure opinions of the respondents, that is, Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD).

3.6.2 Interview schedule

According to Oso and Onen (2009), this entails person-to-person verbal communication wherein the one-person (or a group of people) asks another person (or a group of people) questions in order to elicit a response or comments.

Taherdoost (2016) justifies the researcher's pick of interview schedule as one of the survey instruments, claiming that more individuals are eager to interact verbally than in writing, and so would supply data more readily in an interview.

The researcher used interview schedules (Appendix III and IV) to collect information from Principals of respective schools and TSC Sub County director. This enabled the researcher to gather supplementary data about the participants' personal traits and environment which is of greater value in interpreting outcomes (Rowley, 2012). The researcher also used the information from these interviews to triangulate the information given by the teachers.

The interview schedules were used by the researcher to provide oral interview to the research participants. The interview schedule for TSC Sub-County Director enabled the investigator to acquire first-hand data directly from director who is concerned with confirmation and counter signing of TPAD.

3.6.3 Checklist

Checklist were used to collect information through observation of existing records and extracting necessary information of the students' academic performance before target and end of the term marks. This assisted in assessing students' performance based on the mean score.

3.7 Validity and Reliability of Research Instruments

Validity guarantees that the instruments used in the study are appropriate for the topic, whereas reliability examines whether they are consistent. These two principles are important in research because they make the researcher have confidence in the instruments used in the study.

3.7.1 Validity of the Research Instruments

Grimm and Widaman (2012), notes that construct validity is used when the interest is to find out the extent to which a particular measure is related to other variables with which it is expected to on logical grounds. To ensure construct validity, the researcher formulated research questions and developed items representing the constructs under investigation. The instruments were interrogated by the supervisors if the conceptualized variables are well represented in the questionnaires and interview schedules. The questionnaires were cross evaluated to determine their completeness, uniformity and accuracy.

According to Heale and Twycross (2015), validity is the extrent to which an instrument calculates what it is supposed to measure. Cresswell (2014) suggests that one should use different methods to evaluate validity. According to him, the researcher should use at least two strategies.

To preserve relevance and consistency to the subject, the items were designed depending on the problem being examined. The researcher examined the study's content and goals to verify

that they are reflective of the universe of objects to be investigated. Content validity is the name given to this form of validity.

To guarantee that the tools have content validity, the researcher sought professional opinion from supervisors and colleagues in the Department of Educational Administration, Planning, and Management. To guarantee face validity, the researcher ensured that the questions are formatted in a way that appeals to responders, such as being brief and simple. The instrument also had reasonable number of pages.

3.7.2 Reliability of the Research Instruments

As per Mohamad et al., (2015), reliability is a measure of how the outputs from an experiment are consistent. The authors further emphasized that reliability is the consistency, dependability, stability, predictability, and accuracy of the research instruments. This was determined through a pilot study in three public secondary schools selected in the neighbouring Transmara West Sub County.

The assumption was that the schools being in the neighbouring sub county have a similar experience and so the outcome of their responses would be fairly similar. The data collected from the pilot study was analysed using Statistical Package of Social Science where Cronbach Alpha coefficient was obtained.

According to the Olson (2003), a Cronbach Alpha coefficient of 0.70 or more is considered reliable. The results indicated an overall Cronbach Alpha Coefficient of 0.812 which implies that the questionnaire was reliable.

3.8 Data Collection Procedures

The information for this investigation was obtained in three stages. The first step involved a reconnaissance visit to the area of research. The main objective of the visit was

familiarization with the research area. During this time the researcher obtained an introductory letter from the Director Board of Graduate Studies, University of Kabianga. This letter was used to introduce the researcher to the National Commission for Science, Technology and Innovations (NACOSTI) which gave authorization to the researcher to conduct the study in Trans Mara East Sub- County.

The researcher sought a permit letter from the Trans Mara East Sub-County Director of Education so as to be allowed to carry out the research about the influence of TPAD on students' academic performance in public secondary schools in Trans Mara East Sub-County.

The second phase involved the piloting of the instruments using the same category of participants but from the neighbouring Trans Mara West sub-county. During this time the research instruments were revised accordingly, audience with the schools in the Sub- County were sought to clarify the intention of the investigation.

The third phase entailed the actual collection of data. The researcher booked appointments with the sampled schools through their principals to visit and administer the questionnaires personally. The teachers were given instructions on how to fill in the questionnaires.

The respondents were also assured of confidentiality and anonymity. At the expiry of one week, the researcher collected the filled-in questionnaires for analysis.

The researcher also conducted interviews with the respective Principals in the selected schools and TSC Sub- County director. The researcher informed the participants the intention of the investigation before administering and collecting the filled instruments. The researcher recorded the interviews using audio devices so as to capture all relevant data.

Checklist was used to collect target score as well as end term score based on the performance of students. Checklist was appropriate to collect marks rather than questionnaires. This was used to examine whether the target marks are effectively attained at the end of the term.

3.9 Data Analysis and Presentation

Two types of facts were collected in this study; quantitative and qualitative data. Hence, two types of statistical analysis techniques were used. The collected data was coded and organized into different categories for analysis.

The quantitative data was examined through the application of both descriptive and inferential statistics with the help of Statistical Package for Social Sciences (SPSS) computer software. The descriptive statistics entailed the use of percentages, means and standard deviation, frequency while multiple linear regression analysis was used to analyse influence of teacher performance appraisal and development on students' academic performance in public secondary schools in Transmara East Sub-County. Multiple linear regression model assisted in testing the research hypothesis using 5% significant level. The study also applied Pearson correlation coefficient and examine interrelation between variables.

The investigation adopted a multiple linear regression model given as: -

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

Where;

Y = Academic Performance of Students (Dependent Variable)

β_0 = Constant Term

X_1 = Professional Knowledge

X_2 = Comprehensive Learning Environment

X_3 = Teachers' Professionalism

X_4 = Professional Learning Community

e = Error Term

Qualitative data obtained through interviews with the Principals and TSC Sub- County director were analysed thematically and discussed to corroborate the findings from the questionnaires. The analysed data was then illustrated using bar graphs, pie charts and tables. Finally, interpretation of the data was done and conclusions drawn.

3.10 Ethical Considerations

As per Battiste (2016), researchers who are using humans or animals as subjects must think about how they conduct their research and pay attention to the ethical difficulties encountered.

Confidentiality, responsibility, informed consent, honesty and openness in interacting with other researchers and research volunteers, physical and psychological protection, explanation of the study's objective, and 'de-briefing' of subjects should all be taken into account. The rights of informants or research participants were maintained to the greatest extent possible.

The idea of voluntary participation was emphasized, and participants were not coerced to take part in the study in any way. The respondents were informed from any issue arising from the study and the final project was available if needed by the school administration.

After being fully informed about the procedures to be followed in the study, participants consented to participate. Participants in the research were not placed in a position where they could be harmed as a result of their participation. Physical, psychological, and emotional harm are all examples of harm. The researcher also ensured the anonymity of the informants. The participants' anonymity was preserved by requesting them not to reveal their identities in any of the study tools. Participants were also ensured that the information they supply were not shared with anybody who is not a direct participant in the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1. Introduction

The chapter consists of presentation of results obtained from teachers' questionnaires, principal and TSC Sub-County Education Director interview schedule. The questionnaires results were tabulated and some presented in charts while interview results were presented thematically. These were outlined as response rate, demographic information, TPAD and students' academic performance findings and the inferential statistics. Findings on TPAD and students' academic performance presented the descriptive statistics which were triangulated with interview response from the principal. This assisted to make viable discussion while the inferential statistics assisted in testing of hypothesis. The triangulation of descriptive statistics, inferential statistics and content analysis achieved the following objectives; to assess the influence of professional knowledge, to establish influence of learning environment, to determine the influence of teachers' professionalism and to examine the influence of professional learning community on the educational performance of students in public secondary schools in Transmara East Sub-County.

4.2. Response Rate

The response rate was 97.2% where 139 teachers out of 143 respondents were able to respond to the questionnaires. The results from interview schedules were 100% since all the 20 principals as well as the Sub-County TSC Director was interviewed. The response rate was sufficient since it was above the threshold of 80% which is sufficient for data analysis.

4.3. Demographic Information

The demographic information consists of gender of the teachers, age of the teachers, highest education qualification and duration of teaching. The frequency of assessing the TPAD as well as who administered it was also inquired.

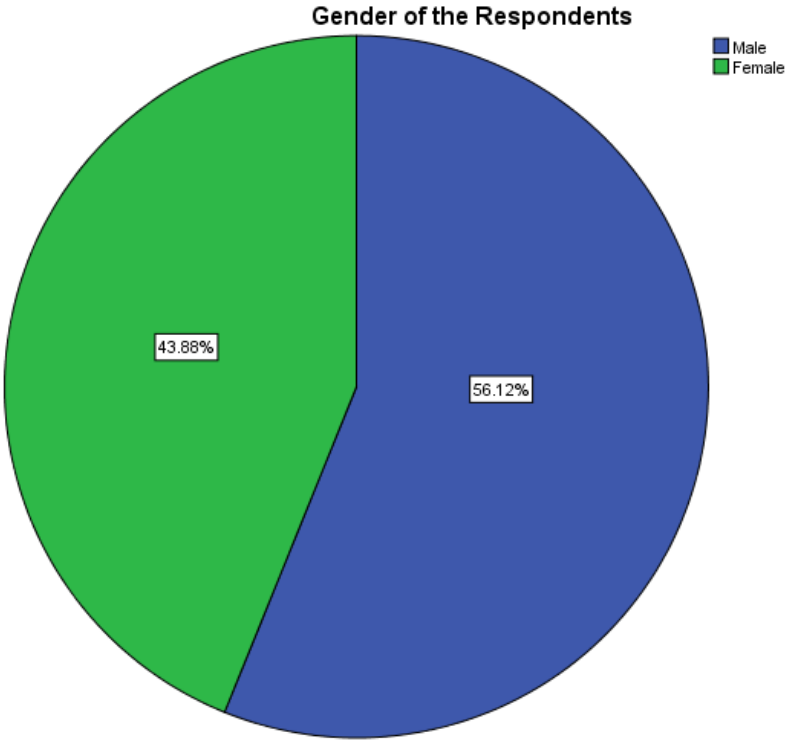


Figure 4.1: Gender of the Respondents

According to the results in Figure 4.1, there are 56.12% more male teachers as compared with 43.88% female teachers. This indicates a small marginal difference of 12.24% between the male and female teachers. The findings of this study reflect the perspectives of both male and female teachers. Gender distribution is crucial for ensuring equality as well as students gaining social skills through the diversity in gender in their schools.

The age of the teachers was evaluated where the ages were categorized into age bracket with classes of 5 years. This was summarized and presented in Table 4.1

Table 4.1: Age of the Respondents (n=139)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 30 years	37	26.6	26.6	26.6
	31-35 years	36	25.9	25.9	52.5
	36-40 years	29	20.9	20.9	73.4
	41-45 years	17	12.2	12.2	85.6
	Above 45 years	20	14.4	14.4	100.0
	Total	139	100.0	100.0	

The results indicate that 37(26.6%) of the respondents were below 30 years. This was followed by 31-35 years with 36(25.9%) respondents, 36-40 years with 29(20.9%) respondents, above 45 years were 20(14.4%) and lastly 41-45 years with 17(12.2%) respondents. These results imply that their turnover of teacher in employment was low with majority of teacher remaining in TSC until retirement age. This indicated that majority of teacher remain teaching and love their jobs rather than moving to other professions they prefer to remain in employment.

The education of the teacher was also evaluated with the results group based on the highest level of education. The results are summarized in Table 4.2.

Table 4.2: Highest Academic Qualification (n=139)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelors of Education Degree	122	87.8	87.8	87.8
	Master of Education Degree	17	12.2	12.2	100.0
	Total	139	100.0	100.0	

The results indicate that 122(87.8%) respondents had bachelor of education degree while 17(12.2%) of the respondents had master of education degree. This indicates high professionalism and education literacy among the teachers.

This is a crucial factor in enhancing the academic performance of students (Sözbilir, 2018). However, there is need to assess extensively the performance of students in relationship with TPAD.

The results further indicate that the Principal assessed the implementation of TPAD on a termly basis to ensure all information presented are correct. According to Alamgir, Salahuddin, & Manzoor (2017), TPAD is a continous assessment with set duration of utilization, it is important that teacher should fill the online with the duration given. The duration of teachers working in a given school was assessed and the results are presented in Figure 4.2.

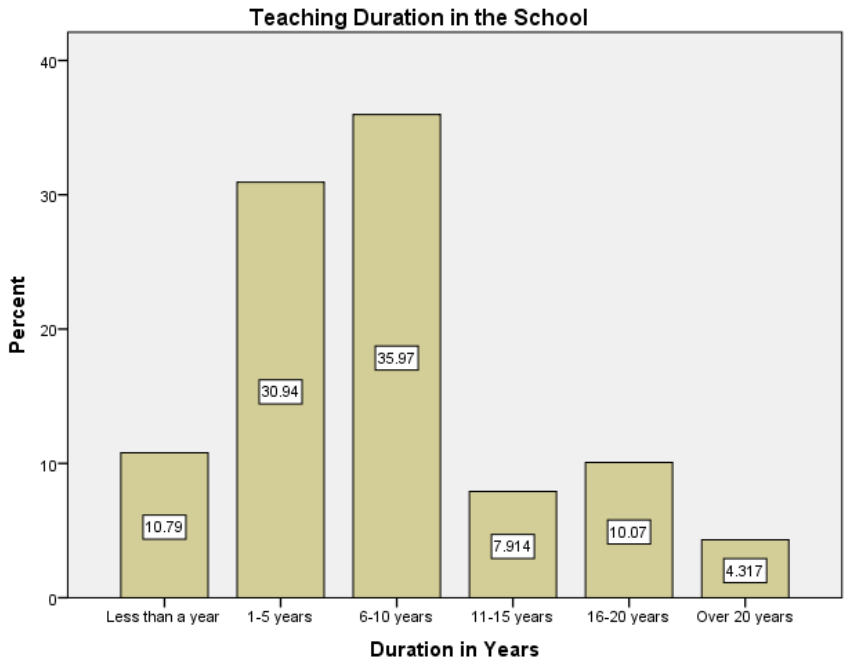


Figure 4.2: Duration of Teaching in the School

Findings reveals 35.97% of the teachers had worked in the same station for 6-10 years, followed by 1-5 years with 30.94% of respondents, less than a year with 10.79%, 16-20 years 10.07%, 11-15 years 7.914% and over 20 years 4.317% of respondents.

The employee turnover in station was between 6-10 years which implies that teachers tend to stay between one to ten years before moving to another station.

4.4. TPAD and Students' Academic Performance

The results of TPAD and students' academic performance were grouped into professional knowledge, comprehensive learning environment, teachers' professionalism, professional learning community and student's academic performance. The results from questionnaires were discussed with results from the interview schedule concurrently. Questionnaire results were presented in tabular form using frequencies, percentages, means and standard deviation while interview were presented thematically and both results were discussed concurrently.

4.4.1. Teachers' Professional Knowledge

The results from teachers' questionnaires which were based on five-point Likert scale were analyzed to provide mean and standard deviation (STD). The results were summarized and presented in Table 4.3.

Table 4.3: Descriptive Statistics for Teachers' Professional Knowledge

	SA=5	A=4	U=3	D=2	SD=1	Mean	STD
Mastery of content	33(23.7%)	93(66.9%)	11(7.9%)	0(0.0%)	0(0.0%)	4.22	0.58
Instructional methods	33(23.7%)	93(66.9%)	13(9.4%)	0(0.0%)	0(0.0%)	4.14	0.56
Professional documents	38(27.3%)	95(68.3%)	6(4.3%)	0(0.0%)	0(0.0%)	4.23	0.52
Assessment and feedback	25(18.0%)	93(66.9%)	21(15.1%)	0(0.0%)	0(0.0%)	4.03	0.58
Lesson observation	16(11.5%)	90(64.7%)	33(23.7%)	0(0.0%)	0(0.0%)	3.88	0.58
Teaching/learning resource	30(21.6%)	98(70.5%)	11(7.9%)	0(0.0%)	0(0.0%)	4.14	0.53
Learners' capability	30(21.6%)	92(66.2%)	17(12.2%)	0(0.0%)	0(0.0%)	4.09	0.58
Learners' talents	20(14.4%)	91(65.5%)	28(20.1%)	0(0.0%)	0(0.0%)	3.94	0.59
ICT integration	9(6.5%)	69(49.6%)	54(38.8%)	7(5.0%)	0(0.0%)	3.57	0.69

Table 4.3 reveals that the teacher satisfactorily demonstrates mastery of the subject content since 33(23.7%) respondents strongly agreed, 93(66.9%) respondents agreed and 11(7.9%) were neutral. A mean of 4.22 and standard deviation of 0.58 indicates that majority of the teacher mastered their subject contents. This implies that teachers were able to master the subject content which is import in the teaching profession. The interview results concurred with the questionnaire findings that teachers demonstrated mastering of the content. On the question how? 12 (60%) respondents pointed that teachers were able to deliver their lessons at ease with sufficient content that assisted the students to improve performance. In the response, Principal 11 said that, "I ensure that I get all required content, materials and teaching aids before I go to the class.

This eases my teaching which has improved my students' performance in exams." The 40% of the respondents asserted that mastering of the content assisted only in lesson delivery.

From the findings, the teachers greatly used appropriate instructional methods as revealed by 33(23.7%) respondents who strongly agreed and 93(66.9%) respondents agreed. However, there were a few, 13(9.4%) who were undecided. The study obtained a mean of 4.14 and standard deviation of 0.56 which reveals that teachers used appropriate instruction methods. This implies that instruction methods used were appropriate for teaching.

As per the response 38(27.3%) strongly agreed, 95(68.3%) agreed and 6(4.3%) were neutral that the teacher prepares professional document based on the current syllabus/design. A mean of 4.23 and standard deviation of 0.52 reveals that professional documents were made by teachers using current syllabus and design. This indicates that there was high professionalism in preparation of professional document in accordance to current syllabus and design in majority of the secondary school by the teachers. Similarly, all the response from principals on "how has TPAD improved teachers' ability to prepare for lessons professionally?" indicates that all the teachers prepare schemes, lesson plans and notes for their classes.

According to the findings the teacher had sufficient ability to carry out learning assessment, feedback and reporting on learners' learning as revealed by 25(18.0%) and 93(66.9%) respondents who strongly agreed and agreed respectively though there were 21(15.1%) respondents who were neutral. The mean was 4.03 with a standard deviation of 0.58 shows that majority of teachers assess and provide reports on learning process. The teachers' ability to conduct learning assessment, feedback and reporting were sufficient for learning purposes.

The results also reveal that teachers undertook their lesson observation at least once a term where 16(11.5%) strongly agreed, 90(64.7%) agreed and 33(23.7%) were neutral. Teachers occasionally conducted lesson observation as revealed by mean of 3.88 and standard of 0.58. This implies that lesson observation was somewhat taken once per term by majority of the teachers.

Findings indicates that there were 30(21.6%) respondents who strongly agreed, 98(70.5%) agreed and 11(7.9%) were neutral that the teachers were satisfactorily able to utilize teaching/learning resource effectively. Therefore, teaching/learning resource were effectively utilized in this schools (Mean =4.14, STD=0.53).

The results indicate teachers has sufficient ability to identify learners' capability and learning styles as shown by 30(21.6%) respondents who strongly agreed and 92(66.2%) agreed but 17(12.2%) were neutral. A mean of 4.09 and standard deviation of 0.58 reveals that majority of teachers utilized appropriate learning styles. This implied that the teachers were able to appropriate learning style for different learners' capability. In response to "how has adoption of TPAD improved lesson observation, utilization of learning resource and adoption of appropriate learning style among teachers?" The principal 5 respondent that, "we have intensified supervision and monitoring of teachers to ensure that teachers did lesson observation, delivered lessons using appropriate teaching strategies as well as teachers have necessary lesson plans.

This is because TPAD gives us the role of evaluating and supervising the teachers." Other response pointed similar respondents that the principals based on their role with assistance of TPAD ensured that teachers conducted lesson observation, utilized learning resources and adoption of appropriate learning style.

As per the result 91(65.5%) agreed, 20(14.4%) strongly agreed and 28(20.1%) were neutral that the teacher had sufficient ability to identify and nurture learners' talents. Most teachers somewhat identified and nurtured students' talent as revealed by a mean of 3.94 and standard deviation of 0.59. This implies that teachers were able to identify and nurture talent of their students. In response to the interview question "Do you think professional knowledge ability of teachers as measured in TPAD helps the students to performance?" reveals that all the principals agreed. On the response "Why do think so?" there were three themes. A majority of 10 (50%) principals argued the ability of the teacher to identify their students' ability, use appropriate teaching aids, techniques and skills to ensure that all students participate in learning and gain understanding of the subject content during the learning process. There were 8 (40%) of the principals who argued that professional knowledge ability will assist the teacher to deliver the right content using appropriate teaching methods, however some teachers are not concerned on assessing abilities of their students. Two principals were of the opinion that even though teacher professional knowledge assists teachers to improve performance, there is need for administrative support to assist teachers get appropriate teaching tools.

The results in Table 4. indicate that the teacher had moderate ability to access, retrieve and integrate ICT in teaching and learning whereby 9(6.5%) respondents strongly agreed, 69(49.6%) respondents agreed, 54(38.8%) were neutral but 7(5.0%) disagreed. The mean reveals low integration of ICT in teaching as revealed by a mean of 3.57 and standard

deviation of 0.69. In this case, the use of ICT in integration, accessing and retrieve of learning resources were moderately adopted in most of the schools.

Table 4.4: Professional Knowledge and Student's Academic Performance

		Professional Knowledge	Students' Academic Performance
Professional Knowledge	Pearson Correlation	1	.738**
	Sig. (2-tailed)		.000
	N	139	139
Students' Academic Performance	Pearson Correlation	.738**	1
	Sig. (2-tailed)	.000	
	N	139	139

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.4 indicates that there existed a positive significant strong relationship between professional knowledge and students' academic performance (R=0.738, P<0.05). This implies that with an increase evaluation process of professional knowledge in TPAD leads to an improvement of students' academic performance.

4.4.2. Comprehensive Learning Environment Findings

In the study comprehensive learning environment was examined based on frequencies, percentage, mean and standard deviation. The results are presented in Table 4.5.

Table 4.5: Descriptive Statistics for Comprehensive Learning Environment

	SA=5	A=4	U=3	D=2	SD=1	Mean	STD
Friendly school/class environment	33(23.7%)	87(62.6%)	19(13.7%)	0(0.0%)	0(0.0%)	4.10	0.61
Stimulating classroom environment	22(15.8%)	91(65.5%)	26(18.7%)	0(0.0%)	0(0.0%)	3.97	0.59
Learners' safety	32(23.0%)	95(68.3%)	12(8.6%)	0(0.0%)	0(0.0%)	4.14	0.55
Learner's conduct	45(32.4%)	91(65.5%)	3(2.2%)	0(0.0%)	0(0.0%)	4.30	0.51

Table 4.5 reveals that the teacher was able to create student friendly class environment through planned activities to demonstrate respect, equity, inclusion and moral values as revealed by 33(23.7%) who strongly agreed and 87(62.6%) agreed, though 19(13.7%) were neutral. The mean of 4.10 and standard deviation of 0.61 indicates that teacher provided the learners with a friendly working environment. Teachers took initiative to improve the class environment through ensuring moral values, inclusion, equity and respect among the students. In a similar interview question a response to "How have teachers created friendly environment in your school since the start of TPAD? Are students involved?" 13(65%) of the principal suggested that the teacher was creative through adopting learner centred teaching methods that enable students to participate in learning. This included the use of inquiry, projects, presentations and demonstration in teaching. There were 5(25%) who asserted that the teachers were able to ensure all students participated in answering, learning and classwork. While 2(10%) principals alluded that the teachers were to accommodate all students and treat them equally.

As per the results there were 22(15.8%) respondent who strongly agreed, 91(65.5%) agreed and 26(18.7%) were neutral that the teacher somehow creates a stimulating classroom environment. The stimulation class environment was somewhat done by teachers based on a mean of 3.97 and standard deviation of 0.59. It meant that teachers created stimulating classroom environment to a moderate extent. The principals' response on how adoption of TPAD enhanced teachers' creativity and ability to manage classroom indicates that TPAD management has enabled the teachers to explore more creative teaching methods. These principals' respondents agreed that due to statutory requirement and performance of appraisal of teachers' incomplete sentence. The teacher has improved creativity in terms of teaching methods, use of ICT in teaching and class assessment and evaluation.

Findings reveals that 32(23.0%) respondents strongly agreed, 95(68.3%) agreed and 12(8.6%) indicates that teachers sufficiently ensured safety of learners.

The mean results of 4.14 and standard deviation of 0.55 indicates that majority of teachers ensured safety of learners. It implies that learner safety was important and the teachers adequately ensured their safety.

The findings indicate that 45(32.4%) of the respondents strongly agreed, 91(65.5%) agreed and 3(2.2%) respondents were neutral that the teachers had sufficient ability to manage learners' conduct and behaviour. Majority of the teachers as indicated by a mean of 4.30 and standard deviation of 0.51 were able to control and manage students' behaviour and conducts. This suggests that teachers play a crucial role to manage learners conduct and behaviour in the school improving their discipline.

In response to "How does comprehensive learning environment as measure in TPAD affect student's academic performance?" reveals that most of the principals have provided sufficient support in improving the school's learning environment. It was therefore, the role of the teacher to use ICT infrastructure, adopt student centred learning, create inclusivity in the learning process and identify support methods for weak students in class.

Table 4.6: Learning Environment and Student's Academic Performance

		Comprehensive Learning Environment	**Students' Academic Performance**
Comprehensive Learning Environment	Pearson Correlation	1	.712**
	Sig. (2-tailed)		.000
	N	139	139
Students' Academic Performance	Pearson Correlation	.712**	1
	Sig. (2-tailed)	.000	
	N	139	139

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.6 indicates that comprehensive learning environment had strong positive significant relationship with student's academic performance (R=0.712, P<0.05). This implies that an increase assessment of comprehensive learning environment in TPAD promotion lead to an increase in student's academic performance.

4.4.3. Teacher professionalism

Teacher professionalism was examined in relation to the performance of students. The mean and standard deviation were used to discuss the results. The summary results were presented in Table 4.7.

Table 4.7: Descriptive Statistics for Teacher's Professionalism

	SA=5	A=4	U=3	D=2	SD=1	Mean	STD
Learner interest	63(45.3%)	76(54.7%)	0(0.0%)	0(0.0%)	0(0.0%)	4.45	0.50
High standards of ethics and professional requirements	77(55.4%)	62(44.6%)	0(0.0%)	0(0.0%)	0(0.0%)	4.55	0.50
Punctuality in lesson attendance.	23(16.5%)	90(64.7%)	26(18.7%)	0(0.0%)	0(0.0%)	3.98	0.60
Timely syllabus coverage.	6(4.3%)	99(71.2%)	26(18.7%)	8(5.8%)	0(0.0%)	3.74	0.63
Legal requirement.	54(38.8%)	85(61.2%)	0(0.0%)	0(0.0%)	0(0.0%)	4.39	0.49
Professional requirements	48(34.5%)	91(65.5%)	0(0.0%)	0(0.0%)	0(0.0%)	4.35	0.48

The findings in Table 4.7 shows that the teachers acted in the best interest of the learner as 63(45.3%) respondents strongly agreed and 76(54.7%) agreed. In the results the mean of 4.45 and standard deviation of 0.50 shows that all teachers had the interest of the learner. As per the results the interest of teachers is adequately focused on the learners' interest.

In response to teachers maintaining high standards of ethics and professional requirements within and outside the institution, there were 77(55.4%) respondents who strongly agreed and 62(44.6%) agreed.

A mean of 4.55 and standard deviation of 0.50 reveals that teachers maintain high standards in ethical issues. It is clear that teachers maintained a high standard of ethics and professional requirements.

The findings reveal that the teacher observed punctuality in lesson attendance, performance of duty and preparation of professional documents where 23(16.5%) respondents strongly agreed, 90(64.7%) agreed and 26(18.7%) were neutral. A mean of 3.98 and standard deviation of 0.60 shows majority of teacher were somewhat punctual. This indicates that teachers were punctual in lesson attendance, performance of duty and preparation of professional documents. This is confirmed by the principals' response from interview who utilized class prefect records, occasion class visit, CCTVs and random assessment of student notes as well as class work.

According to the findings, 99(71.2%) respondents agreed that the teacher had timely syllabus coverage and meeting of deadlines whereas 6(4.3%) respondents strongly agreed, 26(18.7%) was neutral and 8(5.8%) disagreed. The means was 3.74 and standard deviation of 0.63 shows a moderate achieve in deadlines and timely syllabus coverage in the secondary schools. Meeting of deadlines and timely coverage of syllabus was achieved by the teachers. The interview question "What measures are there to ensure that the teachers cover the syllabus on time?" was responded all the principals ensured that a syllabus progress report is provided at the staff meeting that are conducted at the beginning and end of the term. The principals conducted random assessment of notes, classwork and homework from students' books and random visits to class to assess the progress of students.

There were 54(38.8%) respondents who strongly agreed and 85(61.2%) agreed that the teacher demonstrates knowledge on the legal requirements in education. The results indicate a mean of 4.39 and standard deviation of 0.49 that is most of teachers were able to

demonstrate knowledge in education. This implies that teachers had sufficient knowledge of what is required in the teaching process.

In regards to the results of teacher compliance with the professional requirements in teaching and learning, there was 48(34.5%) respondents who strongly and 91(65.5%) agreed. The mean of 4.35 and standard deviation of 0.48 indicates majority of teachers complied with teaching and learning requirement. It implies that teacher had high compliance with their professional requirements for the best teaching and learning delivery.

Principals outlined in response to "What is the main unprofessional conduct of teachers reported?" included teachers' involvement in examine cheating, teachers having affairs with students and teachers' drinking behaviour in school. These are the most unprofessional conduct reported amongst teachers within Kenya (CORT, 2015).

In response to the question, "Do you think using TPAD has improved teachers' professionalism?" the principal indicates that it has enhanced the conduct as well as professionalism of teachers. In response to "Does it translate to students' academic achievement?" the principles were in agreement that it translated to improvement of teachers' performance.

Table 4.8: Teachers' Professionalism and Students' Academic Performance

		Teachers' Professionalism	Students' Academic Performance
Teachers' Professionalism	Pearson Correlation	1	.796**
	Sig. (2-tailed)		.000
	N	139	139
Students' Academic Performance	Pearson Correlation	.796**	1
	Sig. (2-tailed)	.000	
	N	139	139

**. Correlation is significant at the 0.01 level (2-tailed).

The results obtained from correlation analysis reveals that teachers' professionalism had strong positive significant relationship with students' academic performance (R=0.794, P<0.05). Therefore, an increase in assessment of teachers' professionalism had an incremental effect on the academic performance of students.

4.4.4 Professional Learning Community

The findings of professional learning community were examined using percentage, frequency, mean and standard deviation. The summary of results is presented in Table 4.9.

Table 4.9: Descriptive Statistics for Professional Learning Community

	SA=5	A=4	U=3	D=2	SD=1	Mean	STD
Joined professional community	0(0.0%)	78(56.1%)	23(16.5%)	38(27.3%)	0(0.0%)	3.29	0.87
Collaborate with colleagues	0(0.0%)	52(37.4%)	59(42.4%)	28(20.1%)	0(0.0%)	3.17	0.74
Collaborate with parents or guardians	5(3.6%)	94(67.6%)	32(23.0%)	8(5.8%)	0(0.0%)	3.69	0.64
Link with community	0(0.0%)	75(54.0%)	36(25.9%)	28(20.1%)	0(0.0%)	3.34	0.79
Organized programs.	5(3.6%)	21(15.1%)	73(52.5%)	40(28.8%)	0(0.0%)	2.94	0.76

As per the results 78(56.1%) respondents agreed that the teachers had joined professional learning community. On the contrary, 38(27.3%) respondents disagreed and 23(16.5%) respondents were neutral. A mean of 3.29 and standard deviation of 0.87 indicates that teachers somewhat participated in professional learning community. This reveals that there were slightly more teachers who had joined professional learning community as compared to those who had not joined. This implies that there is need for more sensitization of teachers to become part of profession learning community to improve performance of the students.

Findings reveals 52(37.4%) respondents agreed that the teacher collaborates with colleagues and the broader professional learning community to support teaching and learning. On the contrary, 28(20.1%) respondents disagreed and 59(42.3%) were neutral.

There are fewer teachers as compared with those who collaborate with colleague as revealed by a mean of 3.17 and standard deviation of 0.74. There were somewhat more teachers who collaborate with colleagues and the profession learning community to support learning and teaching as compare to those who did not participate.

In the results there were 94(67.6%) respondents agreed and 5(3.6%) strongly agreed that the teachers collaborated with parents/guardians and other stakeholders. It was also found that (23.0%) respondents were neutral and 8(5.8%) disagreed. A mean of 3.69 and standard deviation of 0.64 shows low collaboration of teacher with parents or guardians. This implies that teachers moderately collaborated with parents or guardians and other stakeholders.

There were 75(54.0%) respondents who agreed with the teacher established a linkage with the community, though 36(25.9%) were neutral and 28(20.1%) disagreed. This implies that teachers there were somewhat more teacher who had linkage with the community (Mean=3.34, STD=0.79).

Findings reveals that few teachers participated in programs organized in collaboration with other educational bodies like KNEC, MOE and KICD as indicated by 5(3.6%) who strongly agreed and 21(15.1%) agreed. On the contrary, there were slightly more who were neutral with 73(52.5%) respondents and 40(28.8%) respondents disagreed. There were few teachers who participated in collaborative programmes as revealed by a mean of 2.94 and standard deviation of 0.76. This implies that majority of teachers did not participate in program.

In response to “Is there professional learning community in your school? If yes, how has it contributed to students’ academic performance,” All the principals agreed that there was

professional learning community in the school. The existing professional learning community and it enhance academic performance.

The interview response to "What are the existing mechanisms in place to ensure that the teacher, community, parents and other educational bodies participate in student performance?" reveals that the principals have introduced clubs and societies, motivational programmes, role model programmes, mentorship programmes, academic days, cultural week, class study groups and parent-teacher programmes.

The response to interview questions "Do you think introducing profession learning community through TPAD improves students' performance? If yes, how" indicates that principals believed that it has assisted students to improve in academic performance. TPAD have ensured that teachers play an active role in professional learning community which enhance the relationship between teacher and students. The students have also gained knowledge from collaborating with parents, mentors, role models, teachers and other students. The students have also been able to fill the social needs which is important in social learning process.

Table 4.10: Professional Learning Community and Students' Academic Performance

		Professional Learning Community	**Students' Academic Performance**
Professional Learning Community	Pearson Correlation	1	.608**
	Sig. (2-tailed)		.000
	N	139	139
Students' Academic Performance	Pearson Correlation	.608**	1
	Sig. (2-tailed)	.000	
	N	139	139

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.10 results indicates that professional learning community had a moderately positive significant relationship with academic performance of students ($R=0.608$, $P<0.05$).

This implies that an increase assessment of professional learning community leads to an improvement of students' academic performance.

4.4.5. Students' Academic Performance

Academic performance of students was analyzed using descriptive statistics. This entailed mean and standard deviation obtained from frequencies and percentages. This was summarized in table 4.11.

Table 4.11: Descriptive Statistics for Students' Academic Performance

	SA	A	U	D	SD	Mean	STD
Professional knowledge on performance	63(45.3%)	76(54.7%)	0(0.0%)	0(0.0%)	0(0.0%)	4.45	0.50
Comprehensive learning environment on performance	36(25.9%)	87(62.6%)	16(11.5%)	0(0.0%)	0(0.0%)	4.14	0.60
Teacher professionalism on performance	23(16.5%)	90(64.7%)	26(18.7%)	0(0.0%)	0(0.0%)	3.98	0.60
Learning community on performance	4(2.9%)	63(45.3%)	59(41.7%)	14(10.1%)	0(0.0%)	3.41	0.71

Table 4.11 reveals that the majority of 76(45.7%) respondents agreed and strongly agreed by 76(54.7%) respondents that professional knowledge was presented in TPAD have improved students' academic performance.

The study finding implies that profession knowledge was crucial in the academic performance of students (Mean=4.45, STD=0.50). The response to TSC sub-county secretariat interview question "What is the effect of professional knowledge in the TPAD on students' performance?" reveals similar results that professional knowledge positive assisted the academic performance of students.

According to the results, comprehensive learning environment has greatly improved achievement of student as measure by TPAD as indicates 36(25.9%) who strongly agreed, 87(62.6%) agreed and 16(11.5%) were neutral. It was found that a mean of 4.14 and standard deviation of 0.60 shows that majority teacher agreed that learning environment is crucial for improvement of student's academic performance. The results reveal that comprehensive learning environment play an important role in students' academic performance. In response to "What is the effect of comprehensive learning environment in the TPAD on students' performance?" by TSC sub-county secretariat agreed that comprehensive learning environment contributed positively to the academic performance of students in the sub-county.

As per the results teacher professionalism has somewhat enhanced the performance of student performance as indicates by 23(16.5%) respondents who strongly agreed, 90(64.7%) agreed and 26(18.7%) were neutral. Majority of teachers agreed that professionalism assist leaners with mean of 3.93 and standard deviation of 0.60. The results indicate that professionalism was crucial in enhancing the performance of the learner. As per interview, "What is the effect of teacher professionalism in the TPAD on students' performance?" the TSC sub-county secretariat agreed that teacher professionalism had positive influence on students' academic performance.

Finally, the results indicate that professional learning community somewhat improved students' achievement as reveals by 4(2.9%) respondents who strongly agreed, 63(45.3%) agreed and 59(41.7%) were neutral and 14(10.1%) disagreed. There is poor performance of teacher in professional learning community as indicated by a mean of 3.41 and a standard deviation of 0.71. Professional learning community registered low impact on students' performances as compared with other TPAD variables. The interview with TSC sub-county secretariat agreed that professional learning community positive contributed to students'

performance in response to, “What is the effect of professional learning community in the TPAD on students’ performance?”

Table 4.12: Target Mean Scores, Term Mean Scores and Percentage Change

	N	Minimum	Maximum	Mean	Std. Deviation
Target Mean Score	139	3.50	11.00	7.1975	2.37552
End Term Mean Score	139	2.50	9.90	6.5812	2.32437
Efficiency Percentage	139	71%	97%	90.2%	7.674%

The checklist results in table 4.12 indicated that there was 90.2% efficiency percentage between achievement rate based on target over achieved results. The achievement ranges from 71% to 97% which indicate that score obtained are all below target score but assist in improving performance of the student.

The results indicated that the average target score is 7.20± 2.38 and average mean score of 6.58±2.32. This indicated that TPAD still has a significant role in enhancing the academic performance of students in Kenya. TPAD assist in managing performance has been crucial in promotion of teachers and rewards since it encourage teachers to perform.

4.5. Relationship between TPAD and Students’ Academic Performance

This was used to test the significance of the research hypotheses. Regression analysis was the most appropriate statistical method to test both the significant as well as direction of the study.

4.5.1. Regression Analysis

The regression analysis was conducted to test the hypothesis using a significant level of 5%. The regression model consisted of model summary, ANOVA test and coefficient summary. The model summary is presented in Table 4.13.

Table 4.13: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.895[a]	.801	.795	.19942	1.912

a. Predictors: (Constant), Professional Learning Community, Comprehensive Learning Environment, Teachers' Professionalism, Professional Knowledge

b. Dependent Variable: Students' Academic Performance

According to Table 4.13 the professional learning community, comprehensive learning environment, teachers' professionalism, professional knowledge had strong relationship with student's academic performance (R=0.895). The results also reveal that 80.1% variation of academic performance was attributed to professional learning community, comprehensive learning environment, teachers' professionalism, professional knowledge while other factors contributed a variation of 19.9% (R Square = 0.801). ANOVA analysis is presented in Table 4.14.

Table 4.14: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.419	4	5.355	134.658	.000[b]
	Residual	5.329	134	.040		
	Total	26.748	138			

a. Dependent Variable: Students' Academic Performance

b. Predictors: (Constant), Professional Learning Community, Comprehensive Learning Environment, Teachers' Professionalism, Professional Knowledge

According to the results in Table 4.14, there exists a significant relationship between professional learning community, comprehensive learning environment, teachers' professionalism, professional knowledge and students' academic performance (P=0.000<0.05). This implies that TPAD has a significant relationship with academic performance of students.

Table 4.15: Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.488	.208		-2.342	.021		
	Professional Knowledge	.206	.095	.186	2.171	.032	.202	4.956
	Comprehensive Learning Environment	.191	.080	.196	2.383	.019	.220	4.546
	Teachers' Professionalism	.482	.074	.386	6.513	.000	.424	2.360
	Professional Learning Community	.250	.029	.357	8.484	.000	.842	1.188

a. Dependent Variable: Students' Academic Performance

According to the results in Table 4.15 the multiple regression model based on coefficient was given as;

$$Y = -0.488 + 0.206X_1 + 0.191X_2 + 0.482X_3 + 0.250X_4$$

Whereby Y is Academic Performance of Students, X_1 is Professional Knowledge, X_2 is Comprehensive Learning Environment, X_3 is Teachers' Professionalism, X_4 is Professional Learning Community. According to the results a unit increase in professional knowledge, comprehensive learning environment, teachers' professionalism, professional learning community had 20.6%, 19.1%, 48.2% and 25.0% effect on students' academic performance respectively.

4.5.2. Test of Hypotheses

H_{01}: There is no significant influence of teachers' professional knowledge on the academic performance of students in public secondary schools in Transmara East Sub-County.

The first hypothesis was rejected and alternative was accepted (β_1=0.206, P=0.032<0.05). This implies that teachers' professional knowledge had a positive significant influence on the academic performance of students in public secondary schools in Trans Mara East Sub-County. Mahulae, Lumbanraja and Siahaan (2020) concured with the current results where teachers' professional knowledge had positive impact on teachers' performance. However,

teachers' performance was evaluated rather than performance of the students. On the contrary, Lu, Loyalka, Shi and Chang (2017) found that teaching knowledge had no significant effect on academic performance of students in China. The current study found that teachers' professional knowledge had positive significant influence on the academic performance of students.

H_{02}: There is no significant influence of comprehensive learning environment on academic performance of students in public secondary schools in Transmara East Sub-County.

The second hypothesis was rejected and alternative was accepted (β_2=0.191, P=0.019<0.05). Therefore, there was a significant influence of comprehensive learning environment on academic performance of students in public secondary schools in Transmara East Sub-County. In a similar, study Usman and Madudili (2019) agreed that environment of learning that is conducive had positive influence on academic achievement of students. However, a poor environment resulted to poor performance of students where apathetic attitude of students, school administrative efficacy, teaching process and quality of teachers were evaluated in comprehensive learning environment. The results indicate that comprehensive learning environment had positive influence on academic performance of students in public secondary schools in Trans Mara East Sub-County.

H03: There is no significant influence of professionalism on academic performance of students in public secondary schools in Trans Mara East Sub- County.

In the third hypothesis, the null hypothesis was rejected (β_3=0.486, P=0.000<0.05). This implies that there was a significant influence of professionalism on academic performance of students in public secondary schools in Trans Mara East Sub- County. Zakaria, Nor and Alias (2021) also found that teachers' professionalism had positive influence on students' success. Similarly, Chukwuemeka, et al., (2020) had found that classroom management and profession ethics had positive impact on academic performance of students.

Alamgir, Salahuddin and Manzoor (2017) also found that teaching professionalism contributed by communication skills, managerial skills, knowledge and personality shaped profession attitude had positive significant influence on academic achievement of students. Therefore, teachers' professionalism had positive significant influence on academic performance of students.

H_{04}: There is no significant influence of professional learning community on academic performance of students in public secondary schools in Trans Mara East Sub- County.

Finally, the last hypothesis was rejected and alternative accepted (β_4=0.250, P=0.000<0.05). The results therefore indicate that professional learning community had significant influence on academic performance of students in public secondary schools in Trans Mara East Sub-County. Karamanos (2020) agreed that professional development methods assist students to perform in Mathematics. This indicates that professional learning community through clubs and societies, motivational programmes, role model programmes, mentorship programmes, academic days, cultural week, class study groups and parent-teacher programmes enhance the academic performance of students.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

The chapter provides the summary of findings which were used to make conclusions as well as the recommendations. The section also provides suggestions for further research. Each section is discussed in relation to professional learning community, comprehensive learning environment, teachers' professionalism, professional knowledge and students' academic performance.

5.2. Summary of Findings

The findings of the first objective reveal that teachers demonstrate mastery of the subject content. The teachers were able to sufficiently use appropriate instructional methods. Professional documents based on the syllabus and design is executed by the teachers according to their professional requirements. Learning assessment is carried out as well as feedback and reporting on learners' learning. The teachers somewhat undertook lesson observation at least once a term. In regards to utilization of teaching and learning resource it was found that the teacher effectively uses the resource to improve the performance of their students. The teachers somewhat identify and nurtured learners' talents. However, the teachers were able to moderately access, retrieve and integrated ICT in their learning and teaching process. The results finally found that professional knowledge had positive significant influence on the academic performance of students in public secondary schools in Transmara East Sub- County, Kenya.

The second objective which examined the effect of comprehensive learning environment on students' academic performance found that teachers sufficiently creates a friendly environment that encourages respect, equity, inclusivity and moral values. The learning

environment ensures safety. The teachers were able to somewhat stimulate classroom environment for the learners to participate in learning. Learners conduct and behaviours was managed by the teachers. The study found that their comprehensive learning environment had positive significant influence on the academic performance of students in public secondary schools in Transmara East Sub- County.

In the third objective the study found that teachers acted in learners' best interest. The results indicate that the teachers are able to maintain professional and ethical standards within and out of school. Teachers are able to comply with professional requirements as well as legal requirements in education. Nevertheless, the teachers somewhat achieve punctuality in lesson attendance, duty performance, preparation of professional documents as well as timely syllabus coverage. The inferential results indicate that teachers' professionalism had positive significant influence on the academic performance of students in public secondary schools in Trans Mara East Sub- County.

The last objective that examined professional learning community in relation to the students' academic performance reveals that there are few teachers who joined professional learning community. The findings also show that collaboration with colleagues and broader professional learning community is weak among the teachers especially in ensuring collaborative learning and knowledge sharing.

However, teachers are able to somewhat collaborate with parents or guardians among other stakeholders. Hence, the link between the community and the teachers is weak. More teachers do not participate in programmes that encourage collaboration within education sector.

The results indicate that relationship between TPAD and academic performance of students where the assessment of professional learning community, comprehensive learning

environment, teachers' professionalism, professional knowledge had positive significant influence on students' performance.

5.3. Conclusions

In the first objective the study concludes that professional knowledge had positive significant effect on the academic performance of students in public secondary schools in Trans Mara East Sub- County. This is contributed the teacher's ability to demonstrate mastery of the subject content, use of appropriate instructional methods, ability to prepare professional documents and conduct learners' assessment, feedback and reporting on learners' progress. The teachers are also able to somewhat undertake lesson observation at least once in a term, identify and nurture learners' talent. In terms of utilization of learning and teaching resources it is established that the teachers are able to use it effectively as well as identify learners' capability and learning style that are appropriate for their students. However, ICT integration, access and retrieval are among the least utilized resources in the schools.

The second objective concluded that there was a positive significant influence of comprehensive learning environment on academic performance of students in public secondary schools in Transmara East Sub-County. Teachers are able to create student friendly environment by ensuring respect, equity, inclusivity and moral values are upheld. Safety of learners and management of learners conduct as well as behaviour are achieved by the teachers.

The third objective concluded that teachers' professionalism significantly influences the academic performance of students in public secondary schools in Transmara East Sub-County. It was highly contributed by the ability of teachers to maintain high ethical and professional standards as required in education. The teacher had the best interest of the learner. The teachers comply with legal and professional requirements as required in teaching

as well as education in general. However, punctuality in lesson attendance, duty, preparedness as well as timely syllabus had low performance among teachers' professionalism requirement.

Finally, professional learning community had positive significant influences on academic performance of students in public secondary schools in Transmara East Sub- County. Despite professional learning community contributing positively to the performance, teachers are the weak link in the profession learning community. This is attributed by the few teachers who joins professional learning community, poor collaboration with colleagues and lack of teachers' participation in programs organization to enhance collaboration within education bodies. The teacher tries to collaborate with parents and other stakeholders in other matters that affect the learner. However, there is need to build professional learning community that focuses on improving the learning process of the learner.

5.4. Recommendations

1. On teachers' professional knowledge the study recommends that TPAD should be able to identify the weakest in teacher professional knowledge capability adoption of ICT in learning. The study indicated that ICT access, retrieval and integration in the learning process was somewhat underutilized. The government have put more initiative so that vision 2030 is achieved through provision of electricity and ICT resource in secondary schools.

   The other weak link in professional knowledge is lesson observation should be done more than once a term to ensure that student is participating in the learning process. This will also improve the identification of weak students and enable the teacher to nurture them as well as identify their talents.

2. On comprehensive learning environment, the study recommends that teachers should be able to stimulate learners through adoption of ICT resources and using learners' centred methods.

   The schools should also invest in motivating their students through inviting role models in the society as well as motivational speakers. This will motivate them to perform more as well as motivate the teachers in their effort of improving resulting to improvement of learners' performance.

3. On teachers' professionalism the study recommends that, the school's management should provide a report on ministry of education officers on the punctuality of lesson attendance, duty performance, lesson preparation and timeliness of syllabus coverage as the weakest connection in teachers' professionalism.

   The school management should also develop monitoring and evaluation strategies that would ensure that teachers are in class on time, increase attendance, improve in lesson preparation and timely syllabus coverage. This will ensure high academic performance of students in public secondary schools.

4. On professional learning environment, the study recommends that school management should take initiative of improving of professional learning community through enhancing teacher participation in stakeholders' meetings focussing on student learning.

   The management should also encourage their teachers to be part of professional learning community through set programmes that encourage parents, mentors, role models, community and education officers participate in improving education in the secondary schools. These programmes can be done on termly or monthly basis since it is expensive to invite motivators as well as to organize.

5.5. Suggestion for Further Research

1. The study suggests further research should be done on comprehensive learning community. Teachers, learners, community among other stakeholders which seem to have weak collaboration in public secondary schools in Trans Mara East Sub- County.
2. The study also suggests further research be done on the teachers' competency and performance as it was found to be moderately correlates with performance, this will fill gap on the need for teachers' training to be equip to much the demand needs of education.

REFERENCES

Abbott, M., & McKinney, J. (2013). *Understanding and applying research design.* UK: John Wiley & Sons.

Ahmed, A., Hussain, I., Ahmed, S., & Akbar, M. (2010). Performance appraisals impact on attitudinal impact on attitudinal outcomes & organizational performance. *International Journal of Business & Management*, 5(10), 62-68.

Ahunja, A. K. (2014). *Research Methods in Education.* New Delhi: Lotus Press Publishers and Distributors.

Alamgir, K., Salahuddin, K., & Manzoor, K. (2017). Teaching Professionalism and Students Academic Achievements. *Research on Humanities and Social Sciences*, 7(7), 48-52.

Aloo, J. O., Ajowi, J. O., & Aloka, P. J. O. (2017). Influence of teacher performance appraisal on effectiveness in curriculum evaluation in Kenyan public secondary schools. *Academic Journal of interdisciplinary Studies*, *6*(3), 77.

Atieno, J. A. (2014). *Influence of teaching and learning resources on student performance in Kenya Certificate of Secondary Education in Free Day Secondary education in Embakasi District, Kenya.* Nairobi, Kenya: Unpublished University of Nairobi Dissertation.

Battiste, M. (2016). Research ethics for chapter protecting indigenous knowledge and heritage. *Ethical futures in qualitative research: Decolonizing the politics of* , 111.

Best, J., & Khan, J. (2002). *Research in Education (8th ed.).* New Delhi: Allyn and Bacon.

Bhurtel, A., & Adhikari, E. (2016). Performance Appraisal for Employee Development: Exploring Perceptions of Supervisors. *International Journal of Social Sciences and Management*, 3(2), 93-101.

Chouhan, V., Chandra, B., Goswami, S., & Verma, P. (2016). Analyzing the Performance Appraisal System of a Public Sector Organization in India: The Case of Rajasthan State Mines and Minerals Limited. *IUP Journal of Management Research*, 15(1), 34-75.

Chukwuemeka, J., Evelyn, E., Kalu-mbu, E., Ukamaka, F., Nweke, P., Madu, V., & Iro, S. (2020). Teachers' Professional Ethics and Classroom Management as a Correlate of Students' Academic performance in Public Secondary Schools in Abia State, Nigeria. *The Journal of Social Sciences Research*, 6(7), 715-719.

CORT. (2015). *Code of Regulation for Teachers.* Kenya: Teachers' Service Commission.

Creswell, J. (2014). *A concise introduction to mixed methods research.* London: SAGE Publications.

Creswell, W., & Creswell, D. (2017). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches.* UK: Sage Publications.

Dahabreh, I., & Hernán, M. (2019). Extending inferences from a randomized trial to a target population. *European Journal of Epidemiology*, 34(8), 719-722.

Darling-Hammond, L. (2015). *Getting teacher evaluation right: What really matters for effectiveness and improvement*. Teachers College Press.

DeNisi, A., & Murphy, K. (2017). Performance appraisal and performance management: 100 years of progress? *J Appl Psychol*, 102(3), 421-433.

Dessler, G. (2008). *Human Resource Management (11th Ed).* New Jersey: Pearson Hall.

Dimkpa, D. (2015). Teacher's Conduct in the 21st Centuary: The Need for Enhancing Students' Academic Performance. *Journal of Education and Practice*, 6(35), 71-78.

Dorothy, J., & Bonn, J. O. (2020). Performance management in Kenyan public schools: Implications and challenges. *European Journal of Educational Sciences*, 34-67.

Frey, B. (2018). Feedback Intervention Theory. *SAGE Research Methods*, 1-34.

Fryer, K., Antony, J., & Ogden, S. (2009). Performance management in the public sector. *International Journal of Public Sector Management*, 22(6), 478-498.

Golob, H. (2012). The Impact of Teachers' Professional Development on the Results of Pupils at National Assessment of Knowledge. *Procedia Social and Behavioral Sciences*, 47(2012), 1648-1654.

Grimm, K., & Widaman, K. (2012). *Construct Validity.* NY: Prestige Hall.

Gurr, D. (2017). A model of successful school leadership from the international successful school. *Principal Ship Project Societies*, 5(1), 136-150.

Hagan, T. (2014). Measurements in quantitative research: How to select and report on research instruments. *Oncology Nursing Forum*, 41(4), 431-433.

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence Based Nursing*, 18(3), 66-67.

Hill, H., & Chin, M. (2018). Connections Between Teachers' Knowledge of Students, Instruction and Achievement Outcomes. *American Educational Research Journal*, 55(5), 1076-1112.

Intanam, N., & Wongwanich, S. (2013). An Application of the Professional Learning Community Approach to Developing the Learning Process and Enhancing Academic Achievement in the Mathematics and Science Teaching of the Primary School Student. *Procedia Social and Behavioral Sciences*, 131(2014), 476-483.

Islami, X., & Mulolli, E. (2018). Using Management by Objectives as a performance appraisal tool for employee satisfaction. *Future Business Journal*, 4(1), 1-23.

Joseph, E., Kahuthia, J., & Gakenia, J. (2020). Effects of Performance Appraisal on Teachers' Performance in Selected Public Primary Schools in Limuru Sub-County, Kiambu County. *The Strategic Journal of Business and Change Management* , 7(3), 223-239.

Julie, A. (2012). *Effects of Teacher Evaluations on Teacher Effectiveness and Student Achievement*. USA: Unpublished Master Dissertation for Northern Michigan University.

Kagema, J., & Irungu, C. (2018). An analysis of teacher performance appraisals and their influence on teacher performance in secondary schools in Kenya. *International Journal of Education*, 3(2), 1-10.

Kanika, D. (2022). Professionalizing the teaching service. *Journal Educational Verkenning*, *3*(1), 10-16.

Karamanos, X. (2020). The Influence of Professional Developent Methods on Student Mathematics Performance in New Jersey Public Elementary. *Seto Hall University Dissertations and Theses*, 2732.

Karyaija, K. (2012). The impact of culture on performance appraisal reform in Africa: The case of Uganda's cavil service. *Asian Social Science*, 8(4), 1-15.

Kothari, C. (2004). *Research Methodology, Methods and Techniques (2nd ed.).* New Delhi: New Age Techno Press.

Kwedho, F. (2015). *Effectiveness of Teacher Performance Appraisal programmes among Secondary School Teachers in Nairobi County, Kenya.* Nairobi: Unpublished University of Nairobi Dissertation.

Kyakulumbye, S. (2013, 12 12). *Appraisal system and staff performance in selected secondary schools in Uganda: A comparative case against public service appraisal system*. Retrieved from West East Institute Web Site: https//www.westeastinstitute.com

Lin, Y., & Kellough, J. (2019). Performance Appraisal Problems in the Public Sector: Examining Supervisors' Perceptions. *Public Personnel Management*, 48(2), 179-202.

Locke, E., & Latham, G. (2019). The development of goal setting theory: A half century retrospective. *Motivation Science*, 5(2), 93.

Lu, M., Loyalka, P., Shi, Y., & Chang, F. (2017). The Impact of Teacher Professional Development Programs on Student Achievement in Rural China. *Working Paper No. 600,* 1-34.

Mahulae, A., Lumbanraja, P., & Siahaan, E. (2020). Effect of Professionalism and Competence of Teachers on Teacher Performance and Its Impact on Student Learning Outcomes at Harapan Mandiri College. *International Journal of Research and Review,* 7(11), 38-46.

Malik, R., & Rizvi, A. (2018). Effect of Classroom Learning Environment on Students' Academic Achievement in Mathematics at Secondary Level. *Bulletin of Education and Research*, 40(2), 207-218.

Marika, E., Jagero, N., & Gitari, E. (2021). The Influence of Teacher Professional Knowledge on Service Delivery in Public Secondary Schools in Kitui County, Kenya. *International Journal of Education and Research*, 9(3), 67-76.

Masuku, M., & Sing, A. (2014). Sampling Techniques & determination of Sample Size in Applied Statistics Research: An Overview. *International Journal of Economics, Commerce and Management*, 2(11), 342-356.

Mathias, L. S. (2015). *An assessment of the implementation of open performance review and appraisal system in local government authorities: a case of Morogoro municipal council* (Doctoral dissertation, The Open University of Tanzania).

Midimo, L. (2017). *Teacher response to teacher appraisal: The case of secondary school teachers in Nyeri County*. Nairobi: Unpublished University of Nairobi Dissertation.

Mohamad, M., Sulaiman, N., Sern, L., & Salleh, K. (2015). Measuring the validity and reliability of research instruments. *Procedia-Social and Behavioral Sciences*, 204, 164-171.

Moyal, S., & Iyengar, V. (2016). Performance appraisal in banks: A study of Elk Asia Pacific. *Journal of Human Resource Management and Organisational Behavior*, 3(1), 1-8.

Muli, R. (2011). *The impact of Performance Appraisal on secondary school Teachers Professional Development in Kitui West.* Nairobi: Unpublished Kenyatta University Dissertation.

Mutai, s. (2021). *A Survey of Factors Contributing to Girl Dropout Rates in Public Primary Schools in Transmara East Sub-County of Narok County, Kenya.* Kenya: Unpublished University of Kabianga.

Mwinyi, M., & Orodho, A. (2014). Effectiveness of Quality assurance and standards officers a supervisory role in enhancing students an academic performance in National Examinations in Nakuru District, Kenya. *Journal of Education and Practice,* 5(16), 69-80.

Neema-Abooki, P. (Ed.). (2022). *Quality Assessment and Enhancement in Higher Education in Africa*. Taylor & Francis.

Ng'aruni, J. (2019). *Influence of Institutional Practices on Effective Implementation of Teacher Performance Appraisal in Public Primary Schools in Tharaka South Sub-County, Kenya.* Nairobi: Unpublished University of Nairobi Dissertation.

Ngeno, W., Bett, S., & Cheruiyot, K. (2013). The performance appraisal policy and tools used by the Kenya Teachers Service Commission in Bomet Constituency. *International Journal of Humanities and Social Science*, 3(16), 229-235.

Okech, T. (2017). Impact of Performance Contracting on Efficiency in Service Delivery in the Public Sector. *International Journal of Economics, Commerce and Management*, 5(5), 198-213.

Olson, J. (2003). Data Quality: The Accuracy Dimmension. *Elservier*, 1-45.

Opdenakker, M., & Minnaert, A. (2011). Relationship between learning environment characteristics and academic engagement. *Psychological Reports*, 109(1), 259-284.

Osei-Owusu, B. (2022). Impact of Professional Development Programmes on Teacher's Knowledge and Academic Performance of Senior High School Students in Ghana. *European Journal of Education and Pedagogy*, 3(2), 60-69.

Oso, W., & Onen, D. (2009). *A general guide to writing research proposal and report. A handbook for begnning researchers (Rev. ed.).* Nairobi, Kenya: Jomo Kenyatta Foundation.

Owuor, J., & Jonyo, O. (2017). Performance management in Kenyan public schools: Implications and Challenges. *European Journal of Educational Social Sciences*, 4(3), 19-32.

Prasad, I. (2015). *Principals and Practices of Management.* New Delhi: Sultan Chand and Sons Publisher.

Pulakos, E., Mueller-Hanson, R., & Arad, S. (2019). The evolution of performance management: Searching for value. *Annual Review of Organizational Psychology and Organizational Behavior*, 6, 249-271.

Ratts, R., Archibald, J., Andrews, S., Ballard, C., & Lowney, K. (2015). The Influence of Professional Learning Communities on Student Achievement in Elementary Schools. *Journal of Education & Social Policy*, 2(4), 51-61.

Republic of Kenya. (2013). *The Basic Education Act.* Nairobi, Kenya: Government Printers.

Roschelle, J., Feng, M., Murphy, R., & Mason, C. A. (2016). Online mathematics homework increases student achievement. *AERA Open*, 2(4), 11-25.

Rowley, J. (2012). Conducting Research Inteviews. *Management Research Review*, 1-12.

Sawchuk, S. (2015, 3 24th). *Issues A-Z: Teacher Evaluation: An Issue Overview.* Retrieved from Education Week: http://www.edweek.org/ew/section

Schleicher, D., Baumann, H., Sullivan, D., Levy, P., Hargrove, D., & Barros-Rivera, B. (2018). Putting the system into performance management systems: A review and

agenda for performance management research. *Journal of Management*, 44(6), 2209-2245.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach.* UK: John Wiley & Sons.

Setyaningsih, S., & Suchyadi, Y. (2021). Implementation of Principal Academic Supervision to Improve Teacher Performance in North Bogor. *JHSS (Journal of Humanities and Social Studies)*, *5*(2), 179-183.

Shaaban, K., & Reda, R. (2021). Impact of College Provided Transportation on the Absenteeism and Academic Performance of Engineering Students. *Eurasia Journal of Mathematics, Science and Technology Education*, *17*(3).

Sikawa, G. Y. (2020). *Influence of Strategic Talent Management Practices on Teacher Retention in Rural Public Secondary Schools in Mkuranga District, Tanzania* (Doctoral dissertation).

Simotwo, H. K., Mikalitsa, S. M., & Wambua, B. N. (2018). Climate change adaptive capacity and smallholder farming in Trans-Mara East sub-County, Kenya. *Geoenvironmental Disasters*, *5*(1), 1-14.

Sözbilir, F. (2018). Innovation Capacity and Innovation Performance in Terms of Education Level of Managers. *Journal of Business Research Turk*, 1-12.

Sroinam, S. (2018). The Characteristics of Professional Learning Community of Primary Schools in Udon Thani Province. *Journal of Education & Social Policy*, 5(2), 142-147.

Stronge, J. (2010). Teacher Evaluation and School Improvement. *Journal of Education and Social Sciences*, 1-20.

Stone, R. J., Cox, A., & Gavin, M. (2020). *Human resource management*. John Wiley & Sons.

Sudin, S. (2011). Fairness of and satisfaction with performance appraisal process. *Journal of Global Management*, 2(1), 66-83.

Taherdoost, H. (2016). Validity and Reliability of the Research Instrument: How to Test the Validation of a Questionnaire/ Survey in a Research. *SSRN Electronic Journal*, 5(3): 28-36.

Tejada, J. J., & Punzalan, J. R. B. (2012). On the misuse of Slovin's formula. *The Philippine Statistician*, *61*(1), 129-136.

TSC. (2016). *Performance Appraisal and Development.* Nairobi: Jomo Kenyatta Foundation.

Usman, D., & Madudili, G. (2019). *Evaluation of the Effect of Learning Environment on Student's Academic Performance in Nigeria.* Nigeria: Federal Road Safety Corps.

Van-Den-Broeck, A., Carpini, J., & Diefendorff, J. (2019). Work motivation: Where do the different perspectives lead us. *The Oxford Handbook of Human Motivation*, 2, 354-372.

Welch, A. (2019). Higher education in Asia. *The Oxford handbook of the history of education*, 302-315.

Willcox, K. E., Sarma, S., & Lippel, P. H. (2016). Online education: A catalyst for higher education reforms. *Massachusetts Institute of Technology*.

Zakaria, I., Nor, M., & Alias, B. (2021). The Effect of Teachers' Professionalism on Students' Success. *International Journal of Academic Research in Business & Social Sciences*, 11(1), 483-500.

Zeitlin, A. (2021). Teacher turnover in Rwanda. *Journal of African Economies*, *30*(1), 81-102.

Zhaohui, C., & Anning, A. (2020). Impact of Teacher's Professional Development on Students' Academic Performance in Higher Education. *International Journal of Advanced Education and Research*, 5(2), 50-57.

Zohrabi, M. (2013). Mixed Method Research: Instrument, Validity, Reliability and Reporting Findings. *Theory & Practice in Language Studies*, 3(2), 1-19.

APPENDICES

Appendix I: Letter of Introduction

Nathan Kipkoech Kirui,

University of Kabianga,

P.O. Box 2030 - 20200,

Kericho, Kenya.

Dear respondent,

I am a post-graduate student at University of Kabianga. The study encompasses carrying out research on investigating the **"INFLUENCE OF TEACHER PERFORMANCE APPRAISAL AND DEVELOPMENT (TPAD) ON STUDENTS' ACADEMIC PERFORMANCE IN PUBLIC SECONDARY SCHOOLS IN TRANSMARA EAST SUB-COUNTY, KENYA."** as a requirement for the award of Master of Education degree.

I request you to respond to the items in this questionnaire to the best of your understanding for the purpose of undertaking the research. You are assured that the information you provide will be used for academic purpose only and will be treated with at most confidentiality.

Please, kindly assist by providing the information on the various items. Participation in the study is purely voluntary. Kindly respond to all the questions in the questionnaire.

Yours sincerely,

NATHAN KIPKOECH KIRUI

Appendix II: Teacher's Questionnaire

Section A: Background Information

i. Gender

Male [ ]

Female [ ]

ii. Your age brackets

Below 30 yrs. [ ]

31 – 35 yrs. [ ]

36 – 40 yrs. [ ]

41 – 45 yrs. [ ]

Above 45 yrs. [ ]

iii. Indicate your highest academic qualification

Diploma [ ]

Bachelors of Education Degree [ ]

Masters of Education Degree [ ]

PhD [ ]

iv. For how many years have you been a teacher in the school?

Less than a year [ ]

1-5yrs [ ]

6-10 yrs. [ ]

11-15yrs [ ]

16-20yrs [ ]

Over 20yrs [ ]

v. Does the school head always administer the Teacher Performance Appraisal and Development (TPAD)?

Yes [ ]

No [ ]

vi. How often is the Teacher Performance Appraisal and Development (TPAD) administered?

Termly [ ]

Monthly [ ]

Weekly [ ]

Section B: Professional Knowledge

The following are statements on professional knowledge of teachers as a result of TPAD in public secondary schools. Tick **(√)** according to the level of agreement to each item *(SA strongly agree, A-Agree, U- Undecided, D-Disagree, SD-Strongly disagree)*

Statement	**SA**	**A**	**U**	**D**	**SD**
The teacher demonstrates mastery of the subject content					
The teacher uses appropriate instructional methods					
The teacher prepares professional document based on the current syllabus/design					
The teacher has the ability to carry out learner assessment, feedback and reporting on learners' learning					
The teacher undertakes lesson observation at least once a term					
The teacher is able to utilize teaching/learning resource effectively					
The teacher has ability to identify learners' capability and learning styles					
The teacher has the ability to identify and nurture learners' talents					
The teacher has ability to access retrieve and integrate ICT in teaching and learning					

Section C: Comprehensive Learning Environment

The following are statements on comprehensive learning environment in public second4ary schools as a result of Implementation of Performance Appraisal. Tick (√) according to the

level of agreement to each item (SA strongly agree, A-Agree, U- Undecided, D-Disagree, SD-Strongly disagree)

Statement	**SA**	**A**	**U**	**D**	**SD**
The teacher is able to create child friendly school/class environment through planned activities to demonstrate respect, equity, inclusion and moral values					
The teacher creates a stimulating classroom environment					
The teacher ensures safety of learners					
The teacher has ability to manage learners conduct and behaviour					

Section D: Teacher professionalism

The following are statements on teachers' professionalism in public secondary schools through Implementation of Performance Appraisal. Tick (√) according to the level of agreement to each item (SA strongly agree, A-Agree, U- Undecided, D-Disagree, SD-Strongly disagree)

Statement	**SA**	**A**	**U**	**D**	**SD**
The teacher acts in the best interest of the learner					
The teacher maintains high standards of ethics and professional requirements within and outside the institution					
The teacher observes punctuality in lesson attendance, performance of duty and preparation of professional documents					

The teacher has timely syllabus coverage and meeting of deadlines					
The teacher demonstrates knowledge on the legal requirement in education					
The teacher complies with the professional requirements in teaching and learning					

Section E: Professional Learning Community

The following are statements on professional learning community in public secondary schools as a result of Implementation of Performance Appraisal. Tick (√) according to your level of agreement to each item (SA strongly agree, A-Agree, U- Undecided, D-Disagree, SD-Strongly disagree)

Statement	**SA**	**A**	**U**	**D**	**SD**
The teacher has joined professional learning community					
The teacher collaborates with colleagues and the broader professional learning community to support teaching and learning					
The teacher collaborates with parents/guardians and other stakeholders					
The teacher established a linkage with the community					
The teacher participates in programs organized in collaboration with other educational bodies: KNEC, MOE, KICD etc.					

Section F: Students' Academic Performance

The following are statements on students' academic performance in public secondary schools

Statement	SA	A	U	D	SD
Professional knowledge as presented in TPAD has improved students' academic performance.					
Comprehensive learning environment has improved achievement of student as measure by TPAD.					
Teacher professionalism has enhanced student performance.					
Professional learning community has improved students' achievement.					

Appendix III: Principal's/Deputy Principal and HOD Interview Schedule

Professional Knowledge

a) How does measuring demonstration mastery of the subject in TPAD improve student achievement?

……

……

……

b) How has TPAD improved teachers' ability to prepare for lesson professionally?

……

……

……

c) How has adoption of TPAD improved lesson observation, utilization of learning resource and adoption of learning style among teachers?

……

……

……

d) Do you think professional knowledge ability of teachers as measured in TPAD helps the students to performance?

……

Why do think so?

……..

……

……

Comprehensive Learning Environment

e) How have teachers created friendly environment in your school since the start of TPAD? Are students involved?

……

……

……

f) How has adoption of TPAD enhanced teachers' creativity and ability to manage classroom?

……

……

g) How does comprehensive learning environment as measure in TPAD affect student's academic performance?

……

……

Teacher Professionalism

h) What are the main unprofessional conducts of teachers' reported?

……

……

……

i) What measures have you taken to improve teachers' punctuality?

……

……

j) What measures are there to ensure that the teachers cover the syllabus on time?

……

……

k) Do you think using TPAD has improved teachers' professionalism? Does it translate to students' academic achievement?

……

……

Professional Learning Community

l) Is there professional learning community in your school? If yes how has it contributed to students' academic performance

……

……

……..

m) What are the existing mechanisms in place to ensure that the teacher, community, parents and other educational bodies participate in student performance?

……

……

n) Do you think introducing profession learning community through TPAD improves students' performance? If yes, how…

……

……

Thank you for your cooperation.

Appendix IV: Checklist for teacher

Provide previous target mean and current achieved mean for different subjects.

Subject	**Class/form**	**Previous Target Mean**	**Current Achieved Mean**

Thank you for your cooperation.

Appendix V: TSC Sub-County Director Interview Schedule

Professional Knowledge

a) What is the effect of professional knowledge in the TPAD on students' performance?

……

……

…….....…….

Comprehensive Learning Environment

b) What is the effect of comprehensive learning environment in the TPAD on students' performance?

……

……

…….....……..

Teacher professionalism

c) What is the effect of teacher professionalism in the TPAD on students' performance?

……

……

…….....……..

Professional Learning Community

a) What is the effect of professional learning community in the TPAD on students' performance?

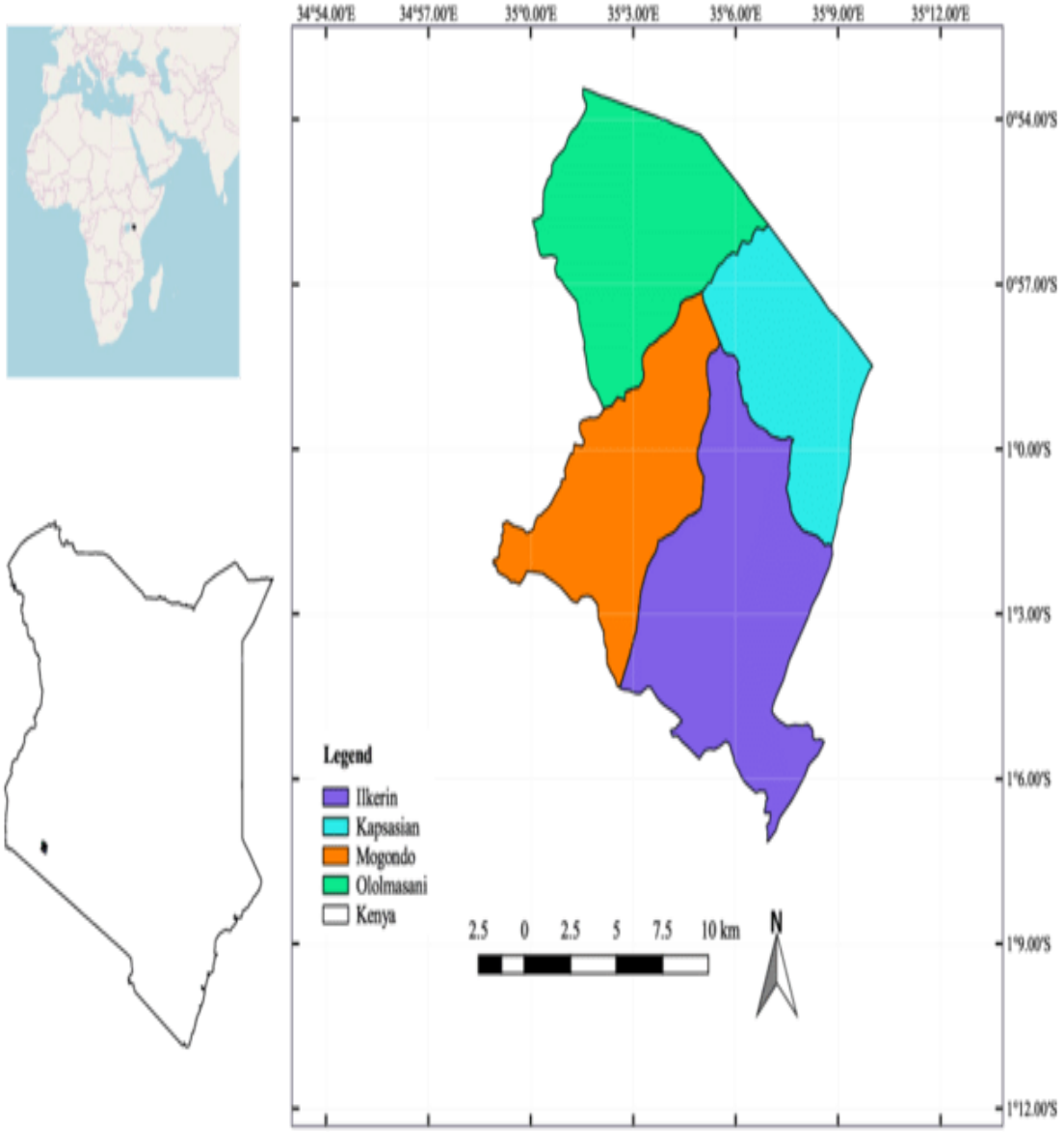
……

……

…….....……

Thank you for your cooperation

Appendix VI: Map of Transmara East Sub-County



Appendix VII: Letter of Clearance to Commence Field Work

UNIVERSITY OF KABIANGA
ISO 9001:2015 CERTIFIED
OFFICE OF THE DIRECTOR, BOARD OF GRADUATE STUDIES

REF: PGC/PAC/008/19 DATE: 5TH JULY, 2022

Nathan Kipkoech Kirui,
Educational Administration, Planning & Management,
University of Kabianga,
P.O Box 2030- 20200,
KERICHO.

Dear Mr. Kirui,

RE: CLEARANCE TO COMMENCE FIELD WORK

I am glad to inform you that the Board of Graduate Studies during its meeting on 15th June, 2022 approved your research proposal entitled **"Influence of Teacher Performance Appraisal and Development on Students' Academic Performance in Public Secondary Schools in Transmara East Sub-County, Narok County, Kenya."**

I am also acknowledging receipt of your corrected proposal via email and hard copy. You are now free to commence your field work on condition that you obtain a research permit from NACOSTI.

Please note that, you are expected to publish at least one (1) paper in a peer reviewed journal before final examination (oral defense) of your Masters thesis.

Thank you.

Yours Sincerely,

05 JUL 2022

Prof. J. K. Kibett
DIRECTOR, BOARD OF GRADUATE STUDIES.

cc 1. Dean, SEASS
2. Educational Administration, Planning & Management
3. Supervisors

Appendix VIII: Research Licence by NACOSTI

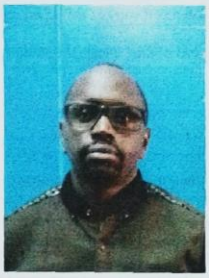
REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **532090**

Date of Issue: **19/July/2022**

RESEARCH LICENSE



This is to Certify that Mr.. Nathan Kipkoech Kirui of University of Kabianga, has been licensed to conduct research in Narok on the topic: INFLUENCE OF TEACHER PERFORMANCE APPRAISAL AND DEVELOPMENT ON STUDENTS' ACADEMIC PERFORMANCE IN PUBLIC SECONDARY SCHOOLS IN TRANSMARA EAST SUB-COUNTY, NAROK COUNTY, KENYA for the period ending : 19/July/2023.

License No: **NACOSTI/P/22/18981**

532090

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY &
INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix IX: Letter from County Commissioner

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND COORDINATION
OF NATIONAL GOVERNMENT

Telegram: **"cc@ narok.go.ke"**, Narok
Telephone: Narok [050] 22433
Fax: [050] 22588
If calling or telephoning ask for the undersigned.
When replying please quote;

County Commissioner
Narok County
P.O. Box 4 – 20500
NAROK

RE: SR.ADM.15/6 VOL.II/124

22nd July, 2022

The Deputy County Commissioner
TRANSMARA EAST.

RESEARCH AUTHORIZATION – MR. NATHAN KIPKOECH KIRUI

Mr. Nathan Kipkoech Kirui of Kabianga University, has been authorized to conduct research on "**Influence of Teacher Performance Appraisal and Development on Students Academic Performance in Public Secondary Schools**" in Transmara East Sub County, Narok County for the period ending 19th July, 2023.

Any assistance accorded to him is highly appreciated.

.

ISAAC W. MASINDE, OGW
COUNTY COMMISSIONER
NAROK COUNTY

C.C.

Mr. Nathan K. Kirui

Appendix X: Letter from Education Director

REPUBLIC OF KENYA

MINISTRY OF EDUCATION

State Department of Early Learning and Basic Education

FAX NO. 050-22391
When replying please quote;

Ref. CDE/NRK/RES/VOL1/281

COUNTY DIRECTOR OF EDUCATION
NAROK COUNTY
P.O BOX 18
NAROK

DATE: 22ND JULY , 2022

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION – MR. NATHAN KIPKOECH KIRUI

The above named is of Student of University of Kabianga.
He has been authorized to carry out research on "***Influence of Teacher Performance Appraisal and Development on Students' Academic Performance in Public Secondary Schools" in the Transmara East Sub County, Narok County, Kenya*** *for the period ending* **19/07/2023.**

Please accord him the necessary assistance.

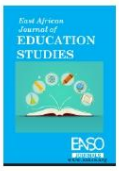
COUNTY DIRECTOR OF EDUCATION NAROK

ANTONY MAKORI
FOR: COUNTY DIRECTOR OF EDUCATION
NAROK

C.C
- County Commissioner – Narok
- Mr. Nathan Kipkoech Kirui

Appendix XI: Publication

East African Journal of Education Studies, Volume 5, Issue 4, 2022
Article DOI: https://doi.org/10.37284/eajes.5.4.1012



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EAST AFRICAN NATURE & SCIENCE ORGANIZATION

Original Article

Teacher's Professional Knowledge and Students' Academic Performance: Evidence of TPAD Implementation in Secondary Schools in Kenya

Nathan Kipkoech Kirui[1] Dr. Viviline Ng'eno, PhD[1] & Dr. Benedicta Aiyobei Tabot, PhD[1]*

[1] University of Kabianga, P. O. Box 2030 - 20200 Kericho, Kenya.
[*] Author for Correspondence ORCID ID: https://orcid.org/0000-0002-8717-2571; Email: kiruinathan24@gmail.com

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

Date Published:

17 December 2022

Keywords:
Teacher's Professional Knowledge, Teacher Performance Appraisal and Development (Tpad), Descriptive Survey, Transmara East Sub-County, Kenya.

ABSTRACT

Teacher performance appraisal and development play a crucial part in enhancing staff performance, reward, motivation, and training. A thorough inspection of most public secondary schools in Transmara East Sub-County disclosed a decline in Kenya Certificate of Secondary Education schools' average performance from 2018 to 2022. It is not evident whether Teacher performance appraisal and development (TPAD) implementation has an influence on the performance of learners' academic achievement. The investigation was steered by Goal Setting theory of motivation. The study adopted a descriptive survey research design. A target population of 277 respondents consisted of 1 Teacher Service Commission (TSC) Sub-County director, 34 principals, and 242 TSC teachers from 34 public secondary school teachers in Transmara East Sub-County. The project adopted a stratified random sampling technique on 164 respondents comprising 1 TSC sub-county director, 20 principals, and 143 teachers employed by TSC. Questionnaires were utilised in acquiring data from teachers while the interview schedule was given to the TSC Sub-County director and principals. The checklist was used to collect target and end-term mean scores. Data collected was examined using both quantitative and qualitative approaches. Quantitative facts were evaluated by descriptive statistics, frequency, mean and standard deviation as well as a correlation for inferential statistics. The quantitative facts were illustrated using charts and tables. Qualitative data was analysed thematically, which was triangulated with quantitative data. Findings reveal that teachers in their professional knowledge, showed mastery of subject content, used appropriate teaching styles, developed required documentation and learning assessment, and utilised learning and teaching resources sufficiently. Hence, professional knowledge has a significant positive influence on the academic performance of students ($P<0.05$). The study concludes that professional knowledge has a significant positive influence on students' academic performance in

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

public secondary schools in Transmara East Sub-County, Kenya. The study recommended that the government should improve training, assessment, and e-resource for ICT integration in the learning and teaching of students.

APA CITATION

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CHICAGO CITATION

Kirui, Nathan Kipkoech, Viviline Ng'eno and Benedicta Aiyobei Tabot. 2022. "Teacher's Professional Knowledge and Students' Academic Performance: Evidence of TPAD Implementation in Secondary Schools in Kenya". *East African Journal of Education Studies* 5 (4), 153-168. https://doi.org/10.37284/eajes.5.4.1012

HARVARD CITATION

Kirui, N. K., Ng'eno, V., & Tabot, B. A. (2022) "Teacher's Professional Knowledge and Students' Academic Performance: Evidence of TPAD Implementation in Secondary Schools in Kenya", *East African Journal of Education Studies*, 5(4), pp. 153-168. doi: 10.37284/eajes.5.4.1012.

IEEE CITATION

N. K. Kirui, V. Ng'eno & B. A. Tabot. "Teacher's Professional Knowledge and Students' Academic Performance: Evidence of TPAD Implementation in Secondary Schools in Kenya", EAJES, vol. 5, no. 4, pp. 153-168, Dec. 2022.

MLA CITATION

Kirui, Nathan Kipkoech, Viviline Ng'eno & Benedicta Aiyobei Tabot. "Teacher's Professional Knowledge and Students' Academic Performance: Evidence of TPAD Implementation in Secondary Schools in Kenya". *East African Journal of Education Studies*, Vol. 5, no. 4, Dec. 2022, pp. 153-168, doi:10.37284/eajes.5.4.1012

INTRODUCTION

Performance appraisal, as per Kagema and Irungu (2018), is the process of validating employees' performance in a specific task against a set of conditions or goals. It is the approach used to assess an employee's performance on an assigned task and determine their professional advancement (Moyal & Iyengar, 2016). Based on Gurr (2017), performance assessment helps employees become more accountable and productive. On human resourcing in schools, Ibrahim & Benson (2020) concur that appraisal is a vital aspect of the corporate performance management system through which administration guarantees that tasks, responsibilities, and output are in alignment with the organisation's priorities. The outputs of performance evaluation, if correctly handled, can provide an institution with a competitive advantage over rivals. Performance appraisal in schooling has been used by governments throughout the world as a technique for determining educational outcomes in diverse educational systems.

Globally, performance appraisal in learning institutions has spread to Asia and the concept was adopted in Sri Lanka, Pakistan, Korea, India, China, and Bangladesh (Haque, 2013). In Canadian schools, teachers were constantly advanced and inspired to expand their tutoring quality (OECD, 2016). In the USA, Maverick educators, as cited in Kwedho (2015), the administrators and elected officials came up with the idea of starting Teachers' Performance Appraisal and Development (TPAD) in the mid-1990s due to low performance in schools. Thus, Performance Contracting (PC) is well entrenched across various states and the school boards are the managers. The intention of performance appraisal was to improve instructors' proficiency and, as a result, students' performance. Managers may use performance appraisal to ascertain training requirements, decide on promotions, transfer, and award employees.

Performance Appraisal is also evident in Africa. In Rwanda, Teachers' Performance Appraisal is adopted in the education sector, and empirical

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

studies have established impressive progress in learning outcomes (Mbabazi, 2013). In the field of education, Kyakulumbye (2013) stated that the public-school appraisal system has culminated in the discovery of performance gaps and educator advancement needs. This was made feasible by assessing instructors' knowledge and experience, as well as teamwork, communication, and time management, and so aligning teaching staff with strategic educational goals. Teachers' Performance Appraisal is aimed at the performance of the students through monitoring and evaluation of capabilities offered by the teachers.

In Kenya, performance appraisal was initiated as part of a public-sector reform effort aimed at improving public services (Republic of Kenya, 2013). TPAD is an uneven approach to appraising all public-academic institution educators irrespective of their areas. This was to facilitate and gauge teacher advancement for enhanced educator performance (Kagema & Irungu, 2018). The TSC, in employing Teacher performance appraisal and development, obligates principals of the school to examine and hand out reports of progress on the teachers' performance levels (Midimo, 2017). Teachers enhance their professional knowledge and application through the preparation of lesson plans, lesson notes, and schemes of work, which translates into their instructional performance. TPAD was developed to evaluate professional development, promotion of co-curricular activities, safety, learner protection, creativity and innovation in educating, management of time, professional knowledge and application as well as maintaining teaching progress and lesson attendance (Ngeno et al., 2013). In this case, the students are provided with appropriate teaching material taught efficiently and effectively.

Teachers' professional knowledge is an important part of teaching which is crucial in ensuring effective learning and student outcome (Hill & Chin, 2018). Zhaohui & Anning (2020) asserts that it can be done through building student engagement, classroom management, conflict management, benchmarking other universities, individual and collaborative research, education conferences and seminars, and reading professional literature as well as courses and workshops. Professional development programmes lead to improvement in academic performance as mediated by professional knowledge, as found by Osei-Owusu (2022). This professional knowledge plays an important role in professional development programmes. Where demonstrating mastery, preparing professional documents, learners assessment and lesson observation were used to measure professional knowledge in TPAD.

In 2018, the Kenya National Union of Teachers (KNUT) and Kenya Union of Post-Primary Education Teachers (KUPPET) challenged the embracing of the new teachers' performance appraisal strategies on the basis of the tool as victimisation for teachers (Joseph et al., 2020). It was also claimed that it does not meet the expectations of improving teachers' commitment to their work and quality education since the tutor's appraisal is more of an error finding than an advisory.

Statement of the Problem

Teacher performance appraisal and development have an effective impact on teacher performance as a tool to determine the educational outcome. Despite the value of teacher appraisal, some believe that it fails to live up to the expectation of improving teaching quality, which is subsequently manifested in higher educational standards due to the way it is administered (Pont et al., 2019). Since the introduction of performance appraisal in public secondary schools in Kenya, teachers, together with the teacher unions have had a lot of complaints about spending too much time preparing the performance appraisal documents at the expense of teaching, which to them, is the most important aspect. They have even doubted whether the performance appraisal itself can translate to having better results in schools, yet one of its objectives is

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

to provide quality education to learners in all public institutions. It is against this backdrop that the researcher asked questions that begged for answers hence the conceptualisation of this study. The reality is that despite the existence of teacher performance appraisal in Kenyan public schools, questions still arise on its applicability, reliability, and validity in improving the performance in the schools. Roschelle et al. (2016) pointed out that teachers do not get timely evaluation reports which might affect the performance of students. Despite, Teacher performance appraisal and development (TPAD) being applied in Transmara East Sub-County, the county has been registering declining students performance. Hence, it is not clear whether Teacher performance appraisal and development affects students' performance in public secondary schools.

Objective of the Study

The intentions of this investigation are to assess the influence of teachers' professional knowledge on the academic performance of students in public secondary schools in Transmara East Sub-County.

LITERATURE REVIEW

Theoretical Framework

The study used goal setting theory which was developed by Edwin Locke in 1968. The approach emphasises the need to define precise, clear, and challenging goals, as well as provide necessary feedback and include staff in the development of organisational priorities (Locke & Latham, 2019). It asserts that these concepts are vital in inspiring workers to attain greater levels of performance, and it emphasises that objectives established by employees tend to encourage them to achieve higher levels of performance. Goals are vital in offering guidance to staff about what has to be done and the dedication required, according to the notion, which increases productivity (Van-Den-Broeck et al., 2019). In the context of TPAD, it acts as a tool for setting goals as well as appraising teachers through setting appropriate goals for the academic performance of the student.

This model recommends the termly appraisal system where every staff member is expected to report on the progress of work by filling up the termly work of the task designated earlier as agreed in the term. At the completion of the term, the work plan is applied to evaluate the performance of the staff for the whole term. The idea underscores the benefit of workers' (teachers) involvement in establishing goals as well as the improvement of student performance. Consequently, contribution in initiating goals promotes inspiration of teachers to complete work efficiently and fast and results in better yield by levitation of effort, feedback, and enthusiasm quality (Islami & Mulolli, 2018). A critic of the theory points to the dependency on feedback quality rather than the proactive ability of the teacher. Hence, goals set sometime are not achieved, leading to the failure of an appraisal system to correct poor performance. Therefore, is a need for schools to develop policies that assist in the active utilisation of the feedback. This includes a reward system for performance achievement, training for poor achievers and motivation for achievers. The theory is therefore appropriate to this study since the teacher performance appraisal and development tool has been used by the teachers' employer, Teacher Service Commission (TSC) to set targets for students' academic performance.

Professional Knowledge and Students' Performance

Professional knowledge of the teacher takes part of the fundamental obligation in strengthening the performance of the students. Demonstrating mastery, preparing professional documents, learners assessments, and lesson observation are part of the important practices of professional knowledge of a teacher. According to Mahulae et al. (2020), the professional knowledge of the teacher relates to the competence of the teacher, which assists in improving learners' achievement. It is one

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

of the TPAD indicators that relate directly to the development of the students as well as the learning process.

Teachers' knowledge and instruction were assessed by Hill and Chin (2018) on achievement outcomes. Students and professional standards which identify the knowledge of students play a crucial role in promoting effective student learning and instruction. This exploration was founded on surveying tutors where evidence from 284 respondents was used. However, there was evidence that concepts are responsive to accurate measurement and such knowledge related to instruction and student outcome. However, knowledge of students' misconceptions remains to be difficult to measure.

Marika et al. (2021) examined the outcome of tutors' professional understanding of delivery service which was done in Kitui County public secondary schools. Teacher Service Commission implemented Teacher performance appraisal and development (TPAD) as means of improving service delivery in secondary schools. However, there is evidence that teachers are not involved in co-curricular activities, are inadequate preparedness in teaching content, and missing lessons. Hence, raising concern on the purpose of improving student performance. Linear regression was selected to analyse the association between variables. The findings disclosed that there existed a noteworthy association between instructors' professional knowledge and service delivery. However, the current study examined the role of teachers' professional knowledge in the performance of the students as a measure of TPAD.

Zhaohui and Anning (2020) examined the effect of educators' professional advancement on students' academic performance in higher learning. A sample of 298 teachers was given survey questionnaires. This was analysed using a structural equation model and confirmatory factor analysis. It was established that instructors at Jiangsu University were interested in building student engagement, classroom management, conflict management, benchmarking other universities, individual and collaborative research, education conferences and seminars, and reading professional literature, as well as courses and workshops. Teacher instructional methods and abilities have been enhanced through professional development within three years. Low employer supports and conflict of interest between professional development and work schedule were an impediment to the participation of teachers in professional development programs.

Mahulae et al. (2020) investigated the impact of the competence and professionalism of educators on the performance of the teacher in relation to the outcome of student learning achievement. A case study of Harapan Mandiri college in Medan, which is a private university with high student achievement. A descriptive explanatory research design adopted a quantitative method where a census of 95 teachers was used. Results indicated that professionalism and competence had a positive effect on teacher performance. Teacher performance had a significant positive outcome on the students' performance; hence, teachers' performance acted as a partial mediator of both professionalism and competence in the performance of the student.

Lu et al. (2017) investigated the outcome of educator professional advancement programs on the success of students in China rural areas. The study utilised 3066 students and 84 teachers from the western province of China. The results indicated that National Teacher Training Program had no significant outcome on the academic performance of students. However, the program had a positive effect on the mathematics teaching knowledge of the teacher but not on teaching practices in the class. Therefore, the programme assists in proving teaching knowledge but is not translated into improving teaching practice nor student learning.

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

The impact of professional development programmes was examined by Osei-Owusu (2022) on the relationship between teachers' knowledge and academic performance. Senior high school 4,103 teachers were surveyed across the North, Middle, and Southern belt of Ghana. Findings revealed that professional development had a positive statistical relationship with professional knowledge. Similarly, both professional development and professional knowledge had a positive statistical relationship with academic performance. Hence professional knowledge had a partial mediating effect on the relationship between professional development and academic performance. The study concludes that professional development had an impact on student academic performance through the professional knowledge of the teacher. The study suggested that teachers should engage in professionally developed programmes that would improve their professional competencies.

RESEARCH METHODOLOGY

A descriptive design was adopted in the study. The design incorporates mixed methods that are quantitative and qualitative in approach improving the quality of results obtained from different tools. The research was carried out in public secondary schools in Transmara East Sub County, Narok County because the area experiences a declining trend in KCSE academic performance even with the compliance of tutors in conducting teacher performance appraisals as specified by TSC. The target population comprises the 34 principals and 242 teachers employed by TSC from the 34 public secondary schools in Transmara East Sub-County and the TSC sub-county director. A sample size of 164 respondents was chosen using stratified random selection where there was one TSC representative, 20 Principals and 143 teachers. The data was obtained by use of questionnaires, interview schedule, and checklist. The questionnaires provided quantitative data that were used to test the influence of TPAD on students' academic performance. However, questionnaires were supported by an interview schedule which provided qualitative information that provided in-depth understanding.

The sampled teachers filled in the questionnaires, whereas interviews were administered to Principals and the TSC Sub-County director. The checklist provided other information that cannot be accessed from TPAD but obtained from the school administration records. This was determined through a pilot study in three public secondary schools selected in the neighbouring Transmara West Sub County. The data collected from the pilot study was analysed using the Cronbach Alpha coefficient, which according to Olson (2003), a Cronbach Alpha coefficient of 0.70 or more is considered reliable. The results indicated an overall Cronbach Alpha Coefficient of 0.812 which implies that the questionnaire was reliable. The quantitative data was examined through the application of both descriptive and inferential statistics with the help of Statistical Package for Social Sciences (SPSS) computer software. The descriptive statistics entailed the use of percentages, means and, standard deviation, frequency, while correlation analysis was used to analyse the influence of teacher performance appraisal and advancement on students' performance in public secondary schools in Transmara East Sub-County.

RESULTS AND DISCUSSIONS

Teachers' Professional Knowledge

The results from teachers' questionnaires which were based on a five-point Likert scale, were analysed to provide mean and standard deviation (STD). The results were summarised and presented in *Table 1*.

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

Table 1: Descriptive Statistics for Teachers' Professional Knowledge

	SA=5	A=4	U=3	D=2	SD=1	Mean	STD
Mastery of content	33(23.7%)	93(66.9%)	11(7.9%)	0(0.0%)	0(0.0%)	4.22	0.58
Instructional methods	33(23.7%)	93(66.9%)	13(9.4%)	0(0.0%)	0(0.0%)	4.14	0.56
Professional documents	38(27.3%)	95(68.3%)	6(4.3%)	0(0.0%)	0(0.0%)	4.23	0.52
Assessment and feedback	25(18.0%)	93(66.9%)	21(15.1%)	0(0.0%)	0(0.0%)	4.03	0.58
Lesson observation	16(11.5%)	90(64.7%)	33(23.7%)	0(0.0%)	0(0.0%)	3.88	0.58
Teaching/learning resource	30(21.6%)	98(70.5%)	11(7.9%)	0(0.0%)	0(0.0%)	4.14	0.53
Learners' capability	30(21.6%)	92(66.2%)	17(12.2%)	0(0.0%)	0(0.0%)	4.09	0.58
Learners' talents	20(14.4%)	91(65.5%)	28(20.1%)	0(0.0%)	0(0.0%)	3.94	0.59
ICT integration	9(6.5%)	69(49.6%)	54(38.8%)	7(5.0%)	0(0.0%)	3.57	0.69

Table 1 reveals that the teacher satisfactorily demonstrates mastery of the subject content since 33(23.7%) respondents strongly agreed, 93(66.9%) respondents agreed, and 11(7.9%) were neutral. A mean of 4.22 and a standard deviation of 0.58 indicates that the majority of the teacher mastered their subject contents. This implies that teachers were able to master the subject content, which is important in the teaching profession. The interview results concurred with the questionnaire findings that teachers demonstrated mastery of the content. The results from the interview showed that 12 (60%) respondents pointed out that teachers were able to deliver their lessons at ease with sufficient content that assisted the students in improving performance. In the response, Principal 11 said, "I ensure that I get all required content, materials, and teaching aids before I go to the class. This eases my teaching, which has improved my students' performance in exams". 40% of the respondents asserted that mastering the content assisted only in lesson delivery.

In the findings, the teachers greatly used appropriate instructional methods as revealed by 33(23.7%) respondents who strongly agreed and 93(66.9%) respondents who agreed. However, there were a few, 13(9.4%) who were undecided. The study obtained a mean of 4.14 and a standard deviation of 0.56, which reveals that teachers used appropriate instruction methods. This implies that the instruction methods used were appropriate for teaching.

As per the response, 38(27.3%) strongly agreed, 95(68.3%) agreed, and 6(4.3%) were neutral that the teacher prepares professional documents based on the current syllabus/design. A mean of 4.23 and a standard deviation of 0.52 reveals that professional documents were made by teaching using the current syllabus and design. This indicates that there was high professionalism in the preparation of professional documents in accordance with the current syllabus and design in the majority of secondary school teachers. Similarly, all the response from principals on "how has TPAD improved teachers' ability to prepare for lessons professionally?" indicates that all the teachers prepare schemes, lesson plans, and notes for their classes.

According to the findings, the teacher had sufficient ability to carry out learning assessment, feedback, and reporting on learners' learning as revealed by 25(18.0%) and 93(66.9%) respondents who strongly agreed and agreed, respectively, though there were 21(15.1%) respondents who were

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

neutral. The mean was 4.03 with a standard deviation of 0.58 shows that the majority of teachers assess and provide reports on the learning process. The teachers' ability to conduct learning assessments, feedback and reporting were sufficient for learning purposes.

The results also reveal that teachers undertook their lesson observation at least once a term where 16(11.5%) strongly agreed, 90(64.7%) agreed, and 33(23.7%) were neutral. Teachers occasionally conducted lesson observation, as revealed by a mean of 3.88 and a standard of 0.58. This implies that lesson observation was somewhat taken once per term by the majority of the teachers.

Findings indicate that there were 30(21.6%) respondents who strongly agreed, 98(70.5%) agreed, and 11(7.9%) were neutral that the teachers were satisfactorily able to utilise teaching/learning resources effectively. Therefore, teaching/learning resources were effectively utilised in these schools (Mean = 4.14, *SD* = 0.53).

The results indicate teachers have sufficient ability to identify learners' capability and learning styles, as shown by 30(21.6%) respondents who strongly agreed and 92(66.2%) agreed, but 17(12.2%) were neutral. A mean of 4.09 and a standard deviation of 0.58 reveals that the majority of teachers utilised appropriate learning styles. This implies that the teachers were able to appropriate learning styles for different learners' capabilities.

In response to "how has the adoption of TPAD improved lesson observation, utilisation of learning resources and adoption of appropriate learning style among teachers?" Principal 5 responded:

> *"We have intensified supervision and monitoring of teachers to ensure that teachers did lesson observation, delivered lessons using appropriate teaching strategies as well as teachers have necessary lesson plans. This is because TPAD gives us the role of evaluating and supervising the teachers".*

Other responses pointed to similar respondents that the principals, based on their role with the assistance of TPAD ensured that teachers conducted lesson observation, utilised learning resources, and adopted appropriate learning styles.

As per the result, 91(65.5%) agreed, 20(14.4%) strongly agreed, and 28(20.1%) were neutral that the teacher had sufficient ability to identify and nurture learners' talents. Most teachers somewhat identified and nurtured students' talent, as revealed by a mean of 3.94 and a standard deviation of 0.59. This implies that teachers were able to identify and nurture the talent of their students. In response to the interview question, "Do you think the professional knowledgeability of teachers as measured in TPAD helps the students to performance?" reveals that all the principals agreed. On the response "Why do you think so?" there were three themes. A majority of 10 (50%) principals argued the ability of the teacher to identify their students' ability and use appropriate teaching aids, techniques, and skills to ensure that all students participate in learning and gain an understanding of the subject content during the learning process. There were 8 (40%) of the principals argued that professional knowledgeability would assist the teacher in delivering the right content using appropriate teaching methods; however, some teachers are not concerned with assessing the abilities of their students. Two principals were of the opinion that even though teacher professional knowledge assists teachers in improving performance, there is a need for administrative support to assist teachers in getting appropriate teaching tools.

The results further indicate that the teacher had moderate ability to access, retrieve and integrate ICT in teaching and learning, whereby 9(6.5%) respondents strongly agreed, 69(49.6%) respondents agreed, 54(38.8%) were neutral, but 7(5.0%) disagreed. The mean reveals low integration of ICT in teaching, as revealed by a mean of 3.57 and a standard deviation of 0.69. In this case, the use of ICT in the integration,

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accessing, and retrieval of learning resources was moderately adopted in most schools.

Professional Knowledge and Student's Academic Performance

Table 2 indicates that there existed a positive significant strong relationship between professional knowledge and students' academic performance (R=0.738, P<0.05). This implies that an increased evaluation process of professional knowledge in TPAD leads to an improvement in students' academic performance.

Table 2: Professional Knowledge and Student's Academic Performance

		Professional Knowledge	Students' Academic Performance
Professional Knowledge	Pearson Correlation	1	.738**
	Sig. (2-tailed)		.000
	N	139	139
Students' Academic Performance	Pearson Correlation	.738**	1
	Sig. (2-tailed)	.000	
	N	139	139

***. Correlation is significant at the 0.01 level (2-tailed).*

The academic performance of students was analysed using descriptive statistics. This entailed mean and standard deviation obtained from frequencies and percentages. This is summarised in *Table 3*.

Table 3: Descriptive Statistics for Students' Academic Performance

	SA	A	U	D	SD	Mean	STD
Professional knowledge	63 (45.3%)	76 (54.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4.45	0.50
Comprehensive learning environment	36 (25.9%)	87 (62.6%)	16 (11.5%)	0 (0.0%)	0 (0.0%)	4.14	0.60
Teacher professionalism	23 (16.5%)	90 (64.7%)	26 (18.7%)	0 (0.0%)	0 (0.0%)	3.98	0.60
Learning community.	4 (2.9%)	63 (45.3%)	59 (41.7%)	14 (10.1%)	0 (0.0%)	3.41	0.71

Table 3 reveals that the majority of 76(45.7%) respondents agreed and strongly agreed by 76(54.7%) respondents that professional knowledge presented in TPAD has improved students' academic performance. The study finding implies that professional knowledge was crucial in the academic performance of students (Mean = 4.45, *SD* = 0.50). The response to the TSC sub-county secretariate interview question "What is the effect of professional knowledge in the TPAD on students' performance?" reveals similar results that professional knowledge positively assisted the academic performance of students.

According to the results, the comprehensive learning environment has greatly improved the

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achievement of students as measured by TPAD, indicating 36(25.9%) teachers strongly agreed, 87(62.6%) agreed, and 16(11.5%) were neutral. It was found that a mean of 4.14 and a standard deviation of 0.60 shows that the majority of teachers agreed that the learning environment is crucial for the improvement of students' academic performance. The results reveal that a comprehensive learning environment plays an important role in students' academic performance. In response to "What is the effect of the comprehensive learning environment in the TPAD on students' performance?" by TSC sub-county secretariate agreed that a comprehensive learning environment contributed positively to the academic performance of students in the sub-county.

As per the results, teacher professionalism has somewhat enhanced the performance of student performance as indicated by 23(16.5%) respondents who strongly agreed, 90(64.7%) agreed, and 26(18.7%) were neutral. The majority of teachers agreed that professionalism assists learners (Mean = 3.93±0.60. The results indicate that professionalism was crucial in enhancing the performance of the learner. As per the interview, "What is the effect of teacher professionalism in the TPAD on students' performance?" the TSC sub-county secretariate agreed that teacher professionalism had a positive influence on students' academic performance.

Finally, the results indicate that the professional learning community somewhat improved students' achievement, as revealed by 4(2.9%) respondents who strongly agreed, 63(45.3%) agreed and 59(41.7%) were neutral, and 14(10.1%) disagreed. There is the poor performance of the teacher in the professional learning community, as indicated by a mean of 3.41 and a standard deviation of 0.71. The professional learning community registered a low impact on students' performances as compared with other TPAD variables. The interview with the TSC sub-county secretariate agreed that the professional learning community positively contributed to students' performance in response to "What is the effect of professional learning community in the TPAD on students' performance?"

Table 4: Target Mean Scores, Term Mean Scores and Percentage Change

	N	Min	Max	Mean	Std. Dev
Target Mean Score	138	3.50	11.00	7.1975	2.37552
End-Term Mean Score	138	2.50	9.90	6.5812	2.32437
Efficiency Percentage	138	71%	97%	90.2%	7.674%

The checklist results in *Table 4* indicated that there was a 90.2% efficiency percentage between achievement rates based on target over achieve results. The achievement ranges from 71% to 97%, which indicate their score obtained are all below the target score but assist in improving the performance of the student. The results indicated that the average target score is 7.20± 2.38 and the average mean score of 6.58±2.32. This indicated that TPAD still has a significant role in enhancing the academic performance of students in Kenya. TPAD assists in managing performance and has been crucial in the promotion of teachers and rewards since it encourages teachers to perform.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study concludes that professional knowledge had a significant positive effect on the academic performance of students in public secondary schools in Transmara East Sub-County. The positive effect of professional knowledge on academic performance was associated with the teacher's ability to demonstrate mastery of the subject

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content, use of appropriate instructional methods, ability to prepare professional documents and conduct learners' assessments, feedback, and reporting on learners' progress. The teachers are also able to somewhat undertake lesson observation at least once a term and identify and nurture learners' talents. In terms of utilisation of learning and teaching resources, it is established that the teachers are able to use them effectively as well as identify learners' capability and learning styles that are appropriate for their students. However, ICT integration, access, and retrieval are among the least utilised resources in the schools.

Recommendations

The study recommends that TPAD was able to identify the weakest teacher professional knowledge capability adoption of ICT in learning. The study indicated that ICT access, retrieval and integration in the learning process was somewhat underutilised. The government have put more initiative so that vision 2030 is achieved through the provision of electricity and ICT resource in secondary schools.

REFERENCES

Abbott, M., & McKinney, J. (2013). *Understanding and applying research design.* UK: John Wiley & Sons.

Ahmed, A., Hussain, I., Ahmed, S., & Akbar, M. (2010). Performance appraisals impact on attitudinal impact on attitudinal outcomes & organisational performance. *International Journal of Business & Management*, 5(10), 62-68.

Ahunja, A. K. (2014). *Research Methods in Education.* New Delhi: Lotus Press Publishers and Distributors.

Alamgir, K., Salahuddin, K., & Manzoor, K. (2017). Teaching Professionalism and Students Academic Achievements. *Research on Humanities and Social Sciences*, 7(7), 48-52.

Atieno, J. A. (2014). *Influence of teaching and learning resources on student performance in Kenya Certificate of Secondary Education in Free Day Secondary education in Embakasi District, Kenya.* Nairobi, Kenya: Unpublished University of Nairobi Dissertation.

Battiste, M. (2016). Research ethics for chapter protecting indigenous knowledge and heritage. *Ethical futures in qualitative research: Decolonising the politics of* , 111.

Belleflamme, P., & Jacqmin, J. (2016). An economic appraisal of MOOC platforms: Business models and impacts on higher education. *CESifo Economic Studies*, 148-169.

Best, J., & Khan, J. (2002). *Research in education (8th ed.)*. New Delhi: Allyn and Bacon.

Bhurtel, A., & Adhikari, E. (2016). Performance Appraisal for Employee Development: Exploring Perceptions of Supervisors. *International Journal of Social Sciences and Management*, 3(2), 93-101.

Chouhan, V., Chandra, B., Goswami, S., & Verma, P. (2016). Analysing the Performance Appraisal System of a Public Sector Organization in India: The Case of Rajasthan State Mines and Minerals Limited. *IUP Journal of Management Research*, 15(1), 34-75.

Chukwuemeka, J., Evelyn, E., Kalu-mbu, E., Ukamaka, F., Nweke, P., Madu, V., & Iro, S. (2020). Teachers' Professional Ethics and Classroom Management as a Correlate of Students' Academic performance in Public Secondary Schools in Abia State, Nigeria. *The Journal of Social Sciences Research*, 6(7), 715-719.

CORT. (2015). *Code of Regulation for Teachers.* Kenya: Teachers' Service Commission.

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

Creswell, J. (2014). *A concise introduction to mixed methods research.* London: SAGE Publications.

Creswell, W., & Creswell, D. (2017). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches.* UK: Sage Publications.

Dahabreh, I., & Hernán, M. (2019). Extending inferences from a randomised trial to a target population. *European Journal of Epidemiology*, 34(8), 719-722.

DeNisi, A., & Murphy, K. (2017). Performance appraisal and performance management: 100 years of progress? *J Appl Psychol*, 102(3), 421-433.

Dessler, G. (2008). *Human Resource Management (11th Ed).* New Jersey: Pearson Hall.

Dimkpa, D. (2015). Teacher's Conduct in the 21st Centuary: The Need for Enhancing Students' Academic Performance. *Journal of Education and Practice*, 6(35), 71-78.

Dorothy, J., & Bonn, J. O. (2020). Performance management in Kenyan public schools: Implications and challenges. *European Journal of Educational Sciences*, 34-67.

Drucker, P. (1999). *Management challenges for the 21st Century.* New York: Harper Business.

Elger, D. (2014). *Theory of Performance.* Pacific Crest: University of Idaho.

Esiokhunjila, J., Mulama, J., & Owano. (2014). The Effectiveness of Performance Contracting in Service Delivery in Public Universities in Kenya. *International Journal of Academic Research in Business and Social Sciences*, 4(10), 413-441.

Frey, B. (2018). Feedback Intervention Theory. *SAGE Research Methods*, 1-34.

Fryer, K., Antony, J., & Ogden, S. (2009). Performance management in the public sector. *International Journal of Public Sector Management*, 22(6), 478-498.

Golob, H. (2012). The Impact of Teachers' Professional Development on the Results of Pupils at National Assessment of Knowledge. *Procedia Social and Behavioral Sciences*, 47(2012), 1648-1654.

Grimm, K., & Widaman, K. (2012). *Construct Validity*. NY: Prestige Hall.

Gurr, D. (2017). A model of successful school leadership from the international successful school. *Principal Ship Project Societies*, 5(1), 136-150.

Hagan, T. (2014). Measurements in quantitative research: How to select and report on research instruments. *Oncology Nursing Forum*, 41(4), 431-433.

Haque, M. (2013). Public Administration in a Globalised Asia: Intellectual Identities, Challenges, and Prospects. *Public Administration and Development*, 33(4), 262-274.

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence Based Nursing*, 18(3), 66-67.

Hill, H., & Chin, M. (2018). Connections Between Teachers' Knowledge of Students, Instruction and Achievement Outcomes. *American Educational Research Journal*, 55(5), 1076-1112.

Ibrahim, K., & Benson, M. (2020). Monitoring & Evaluation Of Teacher Effectiveness, A Case Of Teacher Performance Appraisal & Development Tool In Public Secondary Schools In Nyandarua South Sub-County, Kenya. *Advances in Social Sciences Research Journal*, 7(1), 320-329.

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

Intanam, N., & Wongwanich, S. (2013). An Application of the Professional Learning Community Approach to Developing the Learning Process and Enhancing Academic Achievement in the Mathematics and Science Teaching of the Primary School Student. *Procedia Social and Behavioral Sciences*, 131(2014), 476-483.

Islami, X., & Mulolli, E. (2018). Using Management by Objectives as a performance appraisal tool for employee satisfaction. *Future Business Journal*, 4(1), 1-23.

Joseph, E., Kahuthia, J., & Gakenia, J. (2020). Effects of Performance Appraisal on Teachers' Performance in Selected Public Primary Schools in Limuru Sub-County, Kiambu County. *The Strategic Journal of Business and Change Management* , 7(3), 223-239.

Julie, A. (2012). *Effects of Teacher Evaluations on Teacher Effectiveness and Student Achievement*. USA: Unpublished Master Dissertation for Northern Michigan University.

Kagema, J., & Irungu, C. (2018). An analysis of teacher performance appraisals and their influence on teacher performance in secondary schools in Kenya. *International Journal of Education*, 3(2), 1-10.

Karamanos, X. (2020). The Influence of Professional Developent Methods on Student Mathematics Performance in New Jersey Public Elementary. *Seto Hall University Dissertations and Theses*, 2732.

Karyaija, K. (2012). The impact of culture on performance appraisal reform in Africa: The case of Uganda's cavil service. *Asian Social Science*, 8(4), 1-15.

Kenya National Bureau of Statistics (KNBS). (2019). *Kenya Population and Housing* . Nairobi: Gorvernment Press.

Kothari, C. (2004). *Research Methodology, Methods and Techniques (2nd ed.)*. New Delhi: New Age Techno Press.

Kwedho, F. (2015). *Effectiveness of Teacher Performance Appraisal programmes among Secondary School Teachers in Nairobi County, Kenya*. Nairobi: Unpublished University of Nairobi Dissertation.

Kyakulumbye, S. (2013, 12 12). *Appraisal system and staff performance in selected secondary schools in Uganda: A comparative case against public service appraisal system*. Retrieved from West East Institute Web Site: https//www.westeastinstitute.com

Lin, Y., & Kellough, J. (2019). Performance Appraisal Problems in the Public Sector: Examining Supervisors' Perceptions. *Public Personnel Management*, 48(2), 179-202.

Locke, E. (1968). Toward a theory of task motivation and incentives. *Organisational behavior and human performance*, 3(2), 157-189.

Locke, E., & Latham, G. (2006). Building a practically useful Theory of goal setting and task motivation: A 35 year Odyssey. *American Psychologist*, 57, 705-717.

Locke, E., & Latham, G. (2019). The development of goal setting theory: A half century retrospective. *Motivation Science*, 5(2), 93.

Lu, M., Loyalka, P., Shi, Y., & Chang, F. (2017). The Impact of Teacher Professional Development Programs on Student Achievement in Rural China. *Working Paper No. 600*, 1-34.

Mahulae, A., Lumbanraja, P., & Siahaan, E. (2020). Effect of Professionalism and Competence of Teachers on Teacher Performance and Its Impact on Student Learning Outcomes at

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

Harapan Mandiri College. *International Journal of Research and Review*, 7(11), 38-46.

Malik, R., & Rizvi, A. (2018). Effect of Classroom Learning Environment on Students' Academic Achievement in Mathematics at Secondary Level. *Bulletin of Education and Research*, 40(2), 207-218.

Marika, E., Jagero, N., & Gitari, E. (2021). The Influence of Teacher Professional Knowledge on Service Delivery in Public Secondary Schools in Kitui County, Kenya. *International Journal of Education and Research*, 9(3), 67-76.

Masuku, M., & Sing, A. (2014). Sampling Techniques & determination of Sample Size in Applied Statistics Research: An Overview. *International Journal of Economics, Commerce and Management*, 2(11), 342-356.

Mavindu, P. (2013). *Influence of Principals' instructional supervision practices on students' performance in Kenya certificate of secondary examination in Trans-Mara west district, Kenya.* Nairobi: Doctoral Dissertation, University of Nairobi.

Mbabazi, P. (2013). *Quality in Learning in Rwandan Higher Education: Different Stakeholders' Perceptions of Students' Learning and Employability.* Rwanda: Linköping Univesity.

Midimo, L. (2017). *Teacher response to teacher appraisal: The case of secondary school teachers in Nyeri County.* Nairobi: Unpublished University of Nairobi Dissertation.

Mohamad, M., Sulaiman, N., Sern, L., & Salleh, K. (2015). Measuring the validity and reliability of research instruments. *Procedia-Social and Behavioral Sciences*, 204, 164-171.

Moyal, S., & Iyengar, V. (2016). Performance appraisal in banks: A study of Elk Asia Pacific. *Journal of Human Resource Management and Organisational Behavior*, 3(1), 1-8.

Muli, R. (2011). *The impact of Performance Appraisal on secondary school Teachers Professional Development in Kitui West.* Nairobi: Unpublished Kenyatta University Dissertation.

Mutai, s. (2021). *A Survey of Factors Contributing to Girl Dropout Rates in Public Primary Schools in Transmara East Sub-County of Narok County, Kenya.* Kenya: Unpublished University of Kabianga.

Mwinyi, M., & Orodho, A. (2014). Effectiveness of Quality assurance and standards officers a supervisory role in enhancing students an academic performance in National Examinations in Nakuru District, Kenya. *Journal of Education and Practice*, 5(16), 69-80.

Ng'aruni, J. (2019). *Influence of Institutional Practices on Effective Implementation of Teacher Performance Appraisal in Public Primary Schools in Tharaka South Sub-County, Kenya.* Nairobi: Unpublished University of Nairobi Dissertation.

Ngeno, W., Bett, S., & Cheruiyot, K. (2013). The performance appraisal policy and tools used by the Kenya Teachers Service Commission in Bomet Constituency. *International Journal of Humanities and Social Science*, 3(16), 229-235.

OECD. (2016). *Innovating Education and Educating for Innovation: The Power of Digital Technologies and Skills.* Paris: OECD Publishing.

Okech, T. (2017). Impact of Performance Contracting on Efficiency in Service Delivery in the Public Sector. *International Journal of Economics, Commerce and Management*, 5(5), 198-213.

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

Olson, J. (2003). Data Quality: The Accuracy Dimmension. *Elservier*, 1-45.

Opdenakker, M., & Minnaert, A. (2011). Relationship between learning environment characteristics and academic engagement. *Psychological Reports*, 109(1), 259-284.

Osei-Owusu, B. (2022). Impact of Professional Development Programmes on Teacher's Knowledge and Academic Performance of Senior High School Students in Ghana. *European Journal of Education and Pedagogy*, 3(2), 60-69.

Oso, W., & Onen, D. (2009). *A general guide to writing research proposal and report. A handbook for begnning researchers (Rev. ed.).* Nairobi, Kenya: Jomo Kenyatta Foundation.

Owuor, J., & Jonyo, O. (2017). Performance management in Kenyan public schools: Implications and Challenges. *European Journal of Educational Social Sciences*, 4(3), 19-32.

Pont, B., Nusche, D., & Moorman, H. (2019). *Improving School Leadership.* Netherlands: OECD Publications.

Prasad, I. (2015). *Principals and Practices of Management.* New Delhi: Sultan Chand and Sons Publisher.

Pulakos, E., Mueller-Hanson, R., & Arad, S. (2019). The evolution of performance management: Searching for value. *Annual Review of Organizational Psychology and Organizational Behavior*, 6, 249-271.

Ratts, R., Archibald, J., Andrews, S., Ballard, C., & Lowney, K. (2015). The Influence of Professional Learning Communities on Student Achievement in Elementary Schools. *Journal of Education & Social Policy*, 2(4), 51-61.

Republic of Kenya. (2013). *The Basic Education Act.* Nairobi, Kenya: Government Printers.

Roschelle, J., Feng, M., Murphy, R., & Mason, C. A. (2016). Online mathematics homework increases student achievement. *AERA Open*, 2(4), 11-25.

Rowley, J. (2012). Conducting Research Inteviews. *Management Research Review*, 1-12.

Sawchuk, S. (2015, 3 24th). *Issues A-Z: Teacher Evaluation: An Issue Overview.* Retrieved from Education Week: http://www.edweek.org/ew/section

Schleicher, D., Baumann, H., Sullivan, D., Levy, P., Hargrove, D., & Barros-Rivera, B. (2018). Putting the system into performance management systems: A review and agenda for performance management research. *Journal of Management*, 44(6), 2209-2245.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach.* UK: John Wiley & Sons.

Sözbilir, F. (2018). Innovation Capacity and Innovation Performance in Terms of Education Level of Managers. *Journal of Business Research Turk*, 1-12.

Sroinam, S. (2018). The Characteristics of Professional Learning Community of Primary Schools in Udon Thani Province. *Journal of Education & Social Policy*, 5(2), 142-147.

Stronge, J. (2010). Teacher Evaluation and School Improvement. *Journal of Education and Social Sciences*, 1-20.

Sudin, S. (2011). Fairness of and satisfaction with performance appraisal process. *Journal of Global Management*, 2(1), 66-83.

Taherdoost, H. (2016). Validity and Reliability of the Research Instrument: How to Test the Validation of a Questionnaire/ Survey in a Research. *SSRN Electronic Journal*, 5(3): 28-36.

Article DOI: https://doi.org/10.37284/eajes.5.4.1012

TSC. (2016). *Performance Appraisal and Development*. Nairobi: Jomo Kenyatta Foundation.

Usman, D., & Madudili, G. (2019). *Evaluation of the Effect of Learning Environment on Student's Academic Performance in Nigeria.* Nigeria: Federal Road Safety Corps.

Van-Den-Broeck, A., Carpini, J., & Diefendorff, J. (2019). Work motivation: Where do the different perspectives lead us. *The Oxford Handbook of Human Motivation*, 2, 354-372.

Zakaria, I., Nor, M., & Alias, B. (2021). The Effect of Teachers' Professionalism on Students' Success. *International Journal of Academic Research in Business & Social Sciences*, 11(1), 483-500.

Zhang, X., & Ng, H. (2015). An effective model of teacher appraisal: Evidence from secondary school in Shanghai, China. *Educational Management Administration and Leadership*, 45(2), 196-218.

Zhaohui, C., & Anning, A. (2020). Impact of Teacher's Professional Development on Students' Academic Performance in Higher Education. *International Journal of Advanced Education and Research*, 5(2), 50-57.

Zohrabi, M. (2013). Mixed Method Research: Instrument, Validity, Reliability and Reporting Findings. *Theory & Practice in Language Studies*, 3(2), 1-19.

