

Influence of Principals' Promotion of Professional Development of Teachers on Learners' Academic Performance in Kenya Certificate of Secondary Education in Kisii County, Kenya

Thomas Odongo Ololo¹; Dr. Mary Anyango Onditi²; Dr. Benard Mwebi³

¹PhD Candidate, ²Senior Lecturer and Chairperson Department of Curriculum and Educational Management, ³Senior Lecturer, Jaramogi Oginga Odinga University of Science and Technology-JOUST.

Abstract:- Effective professional development should take cognisance of the needs of teachers, learners and school context. It has been established by research studies that divergent and overlapping policies as well as dysfunctional schooling cultures have frustrated impact of professional development of teachers on good quality learning outcomes. The purpose of this study was to investigate the Influence of Principals' promotion of teachers' professional development on learners' academic performance in Kenya Certificate of Secondary Education (K.C.S.E.) in Public Schools in Kisii County, Kenya. The objective of this study was to: explore the influence of Principals' promotion of professional development of teachers on learners' academic performance in K.C.S.E. in Kisii County. This study was anchored on Karl Ludwig von Bertalanffy General Systems Theory. Mixed method research design of explanatory sequential type with a prioritized quantitative approach in phase one followed by qualitative approach in phase two was applied in the study. The target population was 4,691 participants which included: 340 Principals, 1360 Heads of Departments (H.O.Ds) and 2,991 teachers. A sample of 451 respondents participated in the study. The researcher used proportionate stratified random sampling technique to select 85 schools, 114 H.O.Ds and 252 teachers. Census sampling to select national and special schools while 85 Principals of the selected schools were purposefully sampled. Questionnaires and interview guides were used to collect quantitative and qualitative data respectively. Content validity, Criterion validity, Construct validity and Face validity, of the research instruments were ensured through evaluation by the University supervisors and other experts while internal consistency reliability was estimated by using Cronbach's alpha coefficient formula which yielded alpha coefficient of over 0.7 which was considered adequate. Quantitative data were analysed using Statistical Package of Social Sciences (SPSS) Version 29 while qualitative data were analysed thematically and presented using word verbatim from the respondents and integrated with the findings of phase one. Descriptive statistics were presented in tables and graphs while inferential statistics were presented in terms of Pearson's correlation coefficients, Anova and Regression coefficients. The study found out a weak positive

insignificant influence between promotion of professional development of teachers ($r=.011$, $p\leq.05$; 2 tailed) and learners' academic performance in K.C.S.E. Therefore, the null hypothesis were upheld. These results were supported by Principals' interviews which indicated that professional development programmes are not context specific. It is hoped that the findings of this study would provide information that would form a base for corrective measures towards the unexpected low academic performance in the study locale. The study recommended that further research should be done on influence of principals' leadership skills development on academic performance in K.C.S.E.

Keywords:- *Principals' Leadership Practices, Professional Development, Academic Performance, K.C.S.E, Kenya.*

I. INTRODUCTION

United Nations Educational, Scientific and Cultural Organization-International Institute for Capacity Building in Africa ([UNESCO-IICBA], 2017) reports that most learners in African countries record poor learning outcomes yet Global Education 2030 Agenda aims at eradicating poverty, by ensuring the presence of inclusive and equitable quality education and promotion of lifelong learning opportunities for all. African Union (2016) indicates that professional development programmes availed to teachers have been hampered by inadequate resources thereby leading to no or very little positive impact on improvement of teachers' knowledge and skills, hence a persistent low cognitive learning outcomes. Due to the gaps in the school leadership support in Africa noted in the literature, Bush et al., (2022), recommends for the development of school leadership policies that support professional development programmes to enhance their competencies towards quality education.

Effective principals create an academic capacity by inculcating of high expectations for the school to identify with those who work for improving the quality of teaching and students' academic achievement (Greatbatch and Tate, 2018). Correspondingly, principals' leadership practices result in quality learning through structured continuous professional development and fostering organizational learning,

collaboration, collegiality, parental engagement and other stakeholders' involvement (Abdulziz et al., 2020). Therefore, Devos and Vanderlinde (2018) points out that improving the instructional practices of teachers could be enhanced by the use of professional learning communities that are anchored through the specific subject departments in a school. Principals' support for collaborative instructional practices have also been confirmed by other researchers to improve on learning outcomes (Leithwood, 2019). It is the argument of Vanblaere and Devos (2017) that the principal should provide instructional directions that would influence the teachers to

show collective responsibility and practice reflective dialogue before, during and after presenting lessons to the learners to enable them to achieve higher academic grades.

Similarly, Kenya Vision 2030 underscores the importance of education in ensuring relevant human and social capital for sustainable development (Republic of Kenya, 2019). The national trends of students' performance in Kenya Certificate of Secondary Education (K.C.S.E.) from 2018 to 2022 is shown in Table 1.

Table 1: National Analysis of K.C.S.E. Performance by Mean Score and Grades from 2018 to 2022

Year	2018	2019	2020	2021	2022	AVERAGE
Mean score	3.927	4.467	4.503	4.201	4.469	4.436
Mean grade	D	D+	D+	D +	D+	D+

Source: Adopted from Kenya National Examination Council, (2023).

Table 1 indicates that the national average K.C.S.E performance within the five-year period is 4.436 which is a mean grade of D+. The low performance would not enable the exiting learners to compete favourably in nationally and internationally in both education and employment arena where high quality academic grades are demanded for

employment and continued education (UNESCO, 2017). On the other hand, an improvement in academic performance may lead to increased future income to individuals and to the nation (Hanushek, 2011). Table 2 highlights the learners' performance in K.C.S.E in all the Counties in Nyanza Region from 2018 to 2022.

Table 2: Learners' Performance in K.C.S.E in Nyanza Region from 2018-2022.

COUNTY	MEAN SCORES						MEAN GRADE
	2018	2019	2020	2021	2022	AVERAGE	
Siaya	4.470	4.800	4.120	4.580	4.915	4.577	D+
Nyamira	3.580	4.340	4.740	5.190	4.999	4.569	D+
Migori	4.100	4.140	4.140	5.350	4.981	4.542	D+
Kisumu	4.160	4.490	4.700	4.330	4.823	4.500	D+
Homa Bay	3.690	4.680	4.760	4.980	4.343	4.491	D+
Kisii	3.340	3.560	3.980	4.710	4.770	4.072	D+
Nyanza	3.890	4.330	4.410	4.860	4.810	4.460	D+

Source: Siaya County Education Office, (2023)

Table 2 indicates that performance in K.C.S.E across six Counties resembles the national trend with learning outcomes averaging a mean grade of D+ during the five year period. Comparatively Kisii County like other Counties posts a fluctuating mean scores and has the lowest average mean of 4.460 (D+) which is slightly higher than the national average of 4.436 (D+). It may also suggest that a large number of the candidates obtained grades D+ and below, which almost disqualifies them from pursuing any professional course (Republic of Kenya, 2018).

A. Statement of the Problem

The Teachers' Service Commission substantively appoints Principals to provide satisfactory quality leadership in public secondary schools in Kenya alongside introduction of performance contracting (P.C) for the principals and teacher performance appraisal and development (T.P.A.D) for all teachers (RoK, 2015) with a view to improve on the quality of learning outcomes. Despite this arrangement, there has been persistent low academic performance in K.C.S.E. in Kenya and the study locale. The low educational achievement suggests a lasting negative impact on individual lives and represents lost output for the national economy as a whole

(Micheltmore and Dynarski, 2016) due to a reduced technical skilled human capital and increased low level of productivity. In the context of this study, it may suggest that learners exiting secondary school education might not be competitively absorbed in training institutions to acquire relevant knowledge and skills for their individual and national development (Hanushek, 2011). The government has prevailed upon education stakeholders to address the worrying trend of low academic performance (Republic of Kenya, 2019). Therefore, the researcher investigated the influence of principals' leadership practices on academic performance in K.C.S.E in public schools in Kisii County to shed light on the persistent low average academic performance.

B. Purpose of the Study

The purpose of this study was to investigate the influence of principals' promotion of professional development of teachers on learners' academic performance in Kenya Certificate of Secondary Education (K.C.S.E.) in public schools in Kisii County, Kenya.

C. Objective of the Study

The study was guided by the following research objective; To explore influence of Principals' promotion of professional development of teachers on learners' academic performance in K.C.S.E. in Kisii County.

D. Hypothesis of the Study

The study was guided by the following research hypothesis;

H₀₁ Principals' promotion of professional development does not influence learners' academic performance in K.C.S.E. in Kisii County.

E. Theoretical Framework

This study was anchored on Karl Ludwig von Bertalanffy (1968) General Systems Theory viewed from the perspective of Murphy et al., (2007) leadership for learning model. A system is a cohesive combination of interrelated and interdependent parts which can be natural or human-made and is composed of its subsystems, environment where it exists and the supra-system in a hierarchical dimension (Roth, 2019). General Systems Theory could be suitable in the management of public secondary schools in Kenya due to their being semi-autonomous institutions with various components such as the Board of Management (B.O.M). Externally, they relate with other agencies such as the Ministry of Education and the Teachers' Service Commission (T.S.C.) in school management. The relevance of Bertalanffy (1968) General System's theory when looked at through the lens of Murphy (2007) leadership for learning model emanates from the fact that principals' promotion of professional development of teachers can influence learners' academic performance in K.C.S.E. in Kisii County.

II. LITERATURE REVIEW

Teachers require ongoing and appropriate training to be able to incorporate evidence-based methods into their teaching, to enhance the quality of instruction given to students and to improve educational outcomes (Didion et al., 2020). In light of this, contemporary educational reforms in most countries have reconsidered redefining what constitutes professional development of teachers and provided broad and more comprehensive frameworks for delivering professional development programmes for teachers (Sancar et al., 2021).

A. In-Service Education for Teachers and Learners' Academic Performance in K.C.S.E.

Takahiro and Haegele (2017) explanatory case study investigated the experiences of physical education teachers on an online in-service education in Ohio, U.S.A. revealed that the pedagogical knowledge they acquired enabled them to change from student-centred teaching to performance-centred teaching. In contrast, Khalid et al., (2021) study in Pakistan found out that there is a significant difference between the perception of male and female students about the effect of teachers' advance knowledge and pedagogical skills on the academic performance of students at secondary level and that teachers' advance knowledge is non-significant on students' academic performance. Furthermore, Alfoudi et al.,

(2020) study revealed that most of in-service training programs focused on a single side of teachers' development related to the teachers' specialization or profession hence did not contribute to the teachers' personal and educational needs suggesting that they have insignificant contribution to improvement of learning outcomes. The lack of convergence of the evidence on the relationship between teacher professional knowledge and academic performance made the current study worthwhile.

However, Silva and Oliveira (2020) study in Guinea-Bissau explored the perception of teachers and principals on the impact of Continuous Professional Development (C. P. D) programs on teaching and learning quality in mathematics and Portuguese language found out that C.P.D. improved the teaching skills of teachers and improved student learning outcomes. The reviewed study only explored the perceptions of respondents and was limited in scope because it only studied impact of C.P.D on teachers' teaching and students' performance in Mathematics and Portuguese language ignoring other subjects in the curriculum. The current study included quantitative approaches to determine how professional development contribute on learners' academic performance in public secondary schools in Kenya.

In Kenya, Manduku et al., (2017) study assessed the effect of in-service teacher training programs on teachers' effectiveness in Sotik sub-county. It revealed that there was a statistically significant relationship between in-service teacher training and teachers' effectiveness in terms of; teacher planning for instructions at a coefficient of 0.571($p=0.00<0.05$), teachers content delivery 0.682($r=0.682<0.05$), teachers' evaluation of students' learning 0.611($r=0.611<0.05$), teacher-students' relationship 0.622($r=0.622<0.05$) and teachers' use of teaching and learning resources 0.692($r=0.692<0.05$). The reviewed study revealed relationships between the predictor variable and criterion variables. However, it did not show the influence of professional development on students' learning outcomes. The current study investigated the influence of the predictor variable on the dependent variable to fill the gap.

B. Teachers' Professional Learning Communities and Learners' Academic Performance in K.C.S.E.

In China, Yonghong et al., (2022) study investigated how teacher work engagement was impacted by the professional community dimensions which are; shared norm, collective responsibility, collaboration and reflective dialogue as mediated by teachers' self-efficacy. The study applied a sample of 1123 primary and secondary school teachers, Conservation of Resources Theory and Covariance Structural modelling to test the hypothesis. The study revealed that both shared norms and collective responsibility predicted collaboration which in turn enhanced reflective dialogue. On the other hand, teachers' self-efficacy partially mediated the effects of the four dimensions of professional community on teachers work engagement. The reviewed study investigated impact of professional community on teachers' work engagement as mediated by teachers' self-efficacy while the current study dwelt on the influence of professional learning communities on learners' academic

performance in K.C.S.E. to shed light on how professional development contribute to learners' academic performance in secondary schools in Kenya.

In Zambia, Phiri (2020) study investigated the perception of English teachers on the effectiveness of Lesson study in teaching English and revealed that, Lesson study improved the teachers' teaching skills and learning outcomes because the teachers had an opportunity to observe good practices, interrogate the practices of their colleagues and improve on their own teaching processes which eventually led to students' learning improvement. In the foregoing study, the researcher used English lesson study as a dimension of professional learning community (P.L.C.), in the current study, other subjects and other aspects of PLCs such as collective collaboration over subject contents including designing test items, preparation of professional records and action research were involved to explore the influence of professional development on learners' academic performance in K.C.S.E in public secondary schools in Kenya.

In Kenya, Muli and Wamitu (2019) study investigated the influence of team-teaching on students' performance in Mathematics in public secondary schools in Makeuni sub-county. It used descriptive survey design. The results indicated that there was a positive relationship between the predictor variable and the quality of Mathematics teaching sig ($r=0.500$, $p=0.000$) at 0.05 level of significance. The reviewed study used quantitative approaches to arrive at the results. The current study use both quantitative and qualitative approaches to shed light on the experiences of teachers during team- teachings that maybe used to avail the findings to enrich the quantitative results.

III. RESEARCH METHODOLOGY

A. Research Design

This study applied Mixed Method Research design of explanatory sequential approach which involved prioritising quantitative phase over qualitative phase with data integration (Creswell and Creswell, 2018). The rationale for mixing in the current study was that neither quantitative nor qualitative methods were independently sufficient to capture the trends and details of the situation, such as a complex issue of Principals' leadership practices on learners' academic performance in K.C.S.E. in the study locale. In this study, first, integration was done at methods level by connecting whereby, the researcher first analysed the quantitative data, then used its findings to develop sampling criteria for the follow-up qualitative phase (Fetters et al., 2013). Secondly, integration was done at the interpretation and reporting level through the use of narratives and joint displays (Guetterman et al., 2015).

B. Study Participants

Mugenda and Mugenda (2008) recommends that 10% to 30% of the target population is adequate for a sample. Based on this guideline, 25% of the target population of the schools

was selected for the study because their number is comparatively smaller (Cohen, 2011). Thus 85 schools were sampled for the study. On the other hand, the Principals of the participating schools were purposively sampled. The 1360 Heads of Departments and 2,991 teachers who together constitute 4,351 of the remaining respondents were sampled proportionately to arrive at 114 HoDs and 251 teachers in the sample.

C. Data Collection Instruments

Quantitative data were collected by use of Questionnaires while in-depth interview schedule was applied to collect qualitative data. This aided in testing the agreement of findings obtained from different sources and to enhance clarity and consistency of the findings (Creswell and Creswell, 2018).

D. Validity of Research Instruments

To ensure content, construct, criterion and face validities of instruments of this study, (Taherhoost, 2016), expert validation was applied (Taherhoost, 2016; Sangoseni, et al., 2012; Olson, 2010).

E. Reliability of Research Instruments

This study used Cronbach's Coefficient Alpha for the Questionnaires which averaged at .781 was considered satisfactory.

F. Data Collection Procedure

The researcher obtained introductory letter from the Board of Postgraduate Studies (BPS) of Jaramogi Oginga Odinga University of Science and Technology (JOOUST) to allow him get permit and licence from the National Commission for Science, Technology and Innovation (NACOSTI) and authority letter from JOOUST Ethics Review Committee (E.R.C.). The above documents assisted the researcher to be permitted to conduct the pilot study and the main study by the County Commissioner-Kisii, County Director of Education-Kisii, and principals of the sampled schools, Heads of Departments and teachers. The Principals who were sampled for the study were consulted in readiness for the study and assisted the researcher to seek consent of HoDs and teachers to participate in the study.

IV. FINDINGS AND DISCUSSION

A. Phase 1- Quantitative Research Findings

This study aimed at exploring the influence of Principals' promotion of professional development does on learners' academic performance in K.C.S.E. in Kisii County.

B. Attendance of Teacher Professional Development Course (T.P.D.) for the Last Three Years

Respondents were asked to indicate whether they have attended Teacher Professional Development (T.P.D) course during the last three years. Their responses were in form of either yes or no as indicated in figure 1.

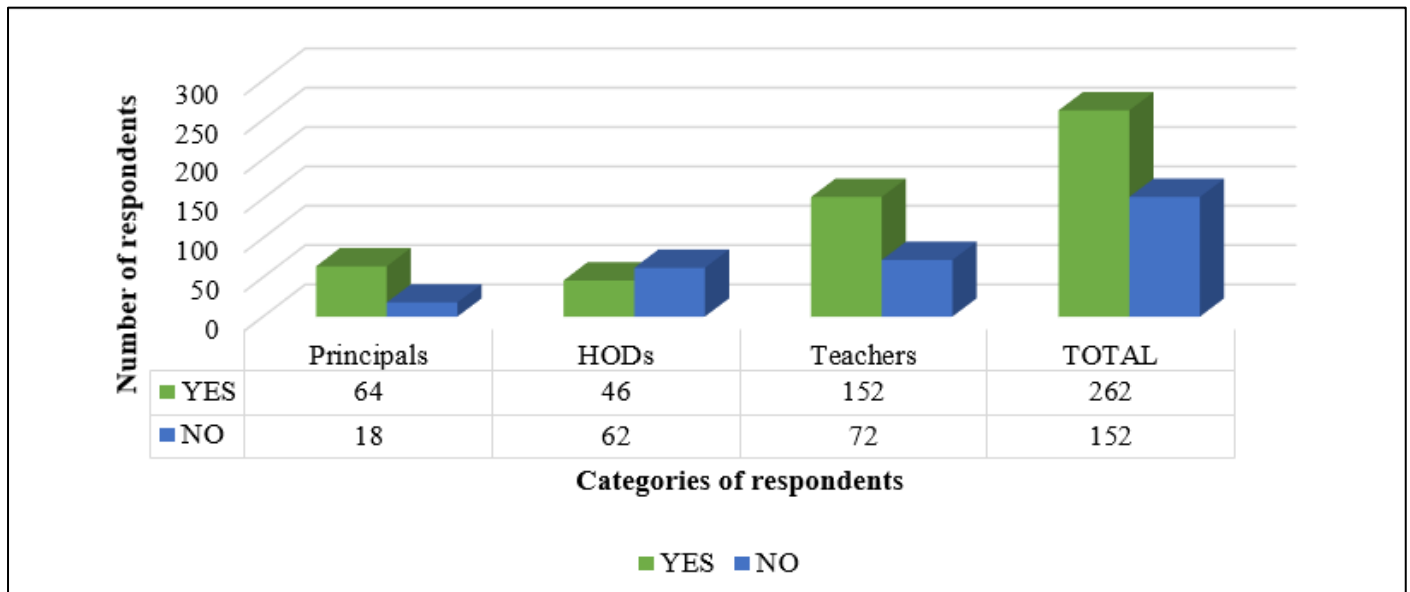


Fig 1: Attendance of Teacher Professional Development (T.P.D) Course
Source: Field Data, (2023)

Figure 1 shows that 262 respondents representing 63.28% of them had attended T.P.D. programs for the last three years compared to 152 respondents representing 36.71% who had not. This finding shows that most teachers have embraced Continuous Teacher Professional Development (C.T.P.D) to equip themselves with current professional knowledge and skills to effectively deliver the curriculum and promote good quality learning outcomes (Mugarura et al., 2022). A similar finding was realized during the interviews of the principals. One of them highlighted that:

It is common to find that in many schools, teachers attend seminars, in-service courses and workshops in various fields related to the teaching profession (P15).

However, a principal of a Sub-County school felt that even though the number of teachers attending CTPD courses seem to be high, the factors motivating them to do so may not be directly related to the school need. She reported that;

According to my observation, teachers attend courses to acquire more certificates so that they may have added advantage during job advertisements by the Teachers' Service Commission (P16).

These results suggest that C.T.P.D programmes have attracted more teachers so that they gain new knowledge. Alfoudi et al., (2020) notes that most in-service course do not holistically contributes to teachers' overall curriculum need hence fail to improve teachers' professional competencies.

C. Whether the Feedback Reports of Teacher Performance Appraisal and Development (T.P.A.D.) Influenced the T.P.D. Course Undertaken

The respondents were asked to indicate whether the T.P.D. course they attended was influenced by the TPAD feedback. Their responses were as shown in figure 2.

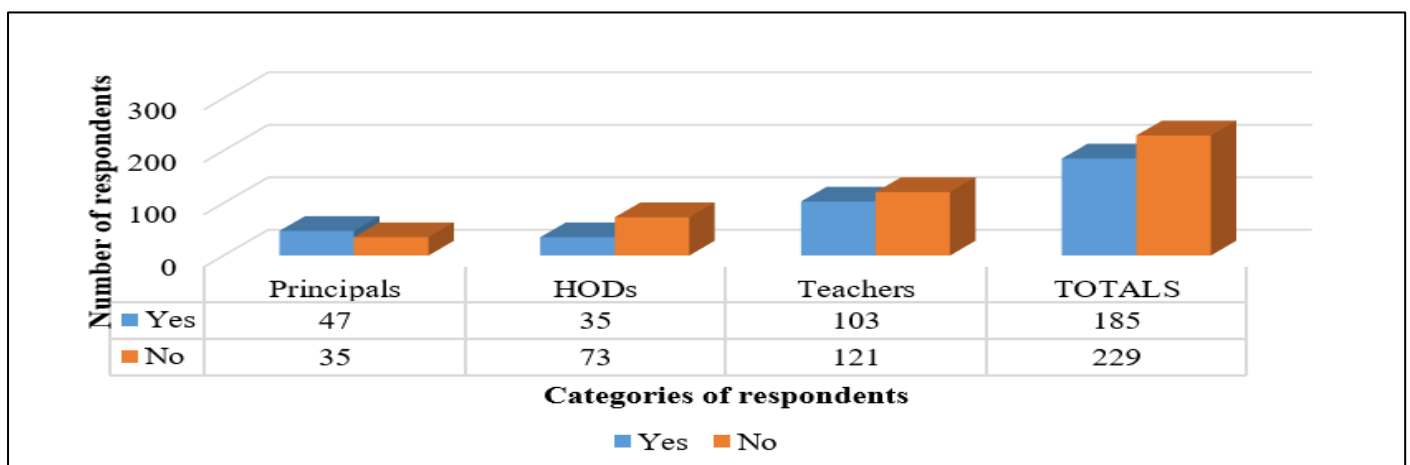


Fig 2: Whether T.P.A.D. Feedback Influenced T.P.D. Course
Source: Field Data, (2023)

From figure 2, it is evident that 185(44.69%) of the respondents indicated that the T.P.D. course they attended was influenced by the T.P.A.D. feedback and 229(55.31%) indicated that the courses they attended were not influenced by the gaps noted in their performance during the T.P.A.D. programs in the schools they teach.

This result was confirmed by the principal interviews which indicated that schools do not have much control on when teachers decide on their training programmes especially when they are not initiated by the schools. One principal of an Extra- County school said that;

Whether trainings are organised by the government or by the teachers, I have not experienced situations where the school is asked to provide individual teacher performance

gaps as derived from TPAD reports before they attend CTPD programmes (P9).

These research findings might be indicating that teacher trainings fail to address the underlying weaknesses in their professional practices within schools thus appear to be ineffective in improving academic performance yet Manchisi et al., (2020) indicates that for effective T.P.D, feedback from teachers' appraisal should inform decision making at planning time.

D. The Level of Contribution of the TPD Courses on the Respondents' Teaching Competencies

The respondents were further asked to indicate the level of contribution of the T.P.D course to their teaching competencies. Their responses are shown in figure 3.

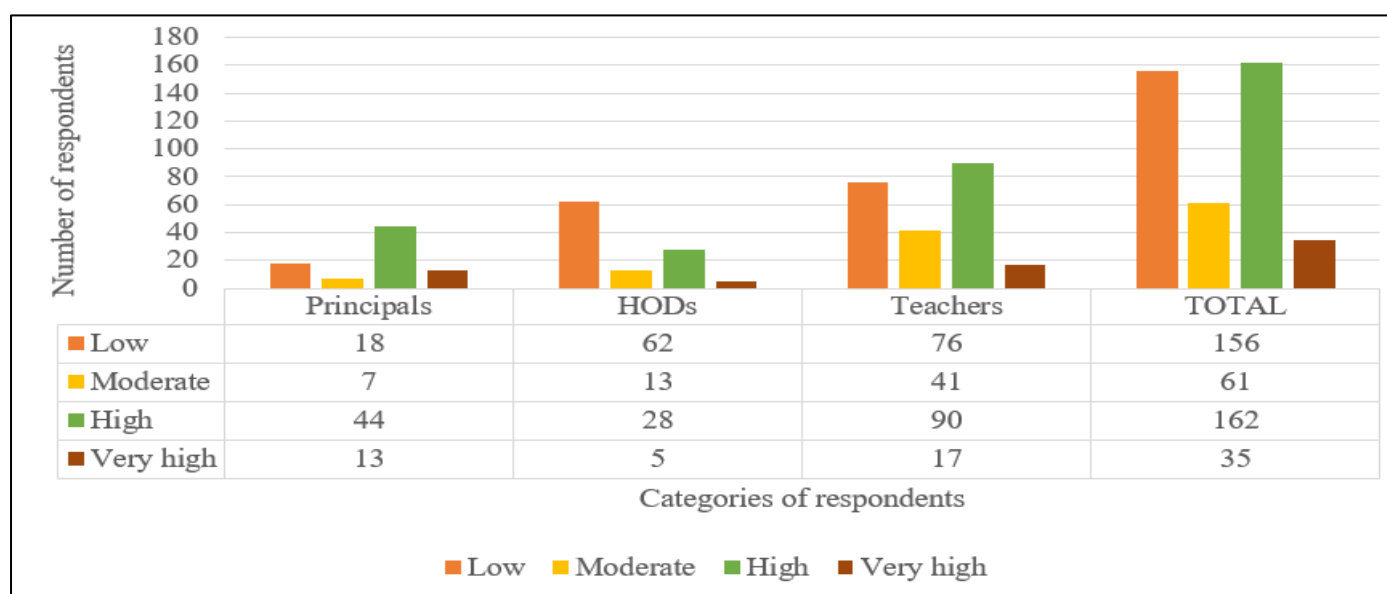


Fig 3: Level of Contribution of T.P.D Course to Teaching Competencies
Source: Field Data, (2023)

Figure 3, shows that 156(37.68%) rated contribution of T.P.D. courses on their teaching competencies as low, 61(14.73%) as moderate, 162(36.13%) as high and 35(8.45%) as very high. It indicates that 217(52.41%) and 197(47.58%) of the respondents revealed that T.P.D programmes did not contribute and contributed respectively to promote teachers' pedagogical competencies.

These findings were further supported by the principals during the interviews who reported that a few number of teachers demonstrate changes in their professional behaviours after attending T.P.D. courses. One of them said that:

A small number of teachers who attend T.P.D. courses demonstrate that their professional knowledge and skills have been built. This has been realized because of the failure of many teachers to put in practice what they learn and by some of them showing clearly that they have performance gaps for example in integration of I.C.T. in lesson delivery (P6)

The study findings suggest that planning for T.P.D. programmes without considering teachers' professional needs may not contribute in enhancing they job performance. T.P.D. courses that do not address school needs have been reported in the literature not contribute in improving learning outcomes (Irungu et al., 2019).

E. Responses on the Influence of Principals' Promotion of Professional Development on Learners' Academic Performance in K.C.S.E. in Kisii County

The study further sought the opinion of the respondents with regard to the influence of principals' promotion of professional development of teachers' on learners' academic performance in K.C.S.E in Kisii County. The results are presented in Table 3.

Table 3: Descriptive Statistics on Principals' Promotion of Professional Development

The Principal....	N	Minimum	Maximum	Mean	Std. Deviation
Expose teachers to in-service courses to enhance their job commitment and productivity.	414	1	5	4.12	.960
Set aside time for departmental meetings to enable teachers to exchange instructional ideas and experiences.	414	1	5	4.32	.771
Encourage my low-performing teachers to team –up with high performing teachers to improve on their performance.	414	1	5	4.24	.828
Prevail upon teachers to use knowledge learnt in seminars to improve on academic performance	414	1	5	4.21	.908
Plan for lesson study programs to enable teachers to learn relevant subject pedagogy.	414	1	5	4.03	.981
Ensure that TPD activities are linked to curriculum goals of the school to improve on actual teaching and learning	414	1	5	4.03	.998
Have established functional subject departments to promote teacher learning through exchange of ideas	414	1	5	4.20	.951
Collaborate with other schools to enable teachers participate in professional learning communities	414	1	5	4.16	.974
Remind the teachers to focus instructional strategies on high order thinking and problem solving	414	1	5	4.22	.867
Determine that classroom instruction reflects teacher's high level pedagogical content knowledge to challenge all learners' conceptions	414	1	5	4.11	.891
Valid N (listwise)	414	5	5	4.16	.913

Likert Scale: 5= Strongly Agree,4= Agree,3= Undecided, 2= Disagree and 1= Strongly Disagree

Source: Field Data, (2023)

Table 3 indicates that the influence of principals' promotion of professional development of teachers on learners' academic performance in K.C.S.E. is high ($M=4.16$; $SD=.913$). The respondents agreed that; Principals expose teachers to in-service courses to enhance their job commitment and productivity ($M=4.12$ $SD=0.960$), set aside time for departmental meetings to enable teachers to exchange instructional ideas and experiences ($M=4.32$ $SD=0.771$), encourage low-performing teachers to team –up with high performing teachers to improve on their performance ($M=4.24$ $SD=0.828$), prevail upon teachers to use knowledge learnt in seminars to improve on academic performance ($M=4.21$ $SD=0.908$), plan for lesson study programs to enable teachers to learn relevant subject pedagogy ($M=4.03$ $SD=0.981$), ensure that TPD activities are linked to curriculum goals of the school to improve on actual teaching and learning ($M=4.03$ $SD=0.998$), have established functional subject departments to promote teacher learning through exchange of ideas ($M=4.20$ $SD=0.951$), collaborate with other schools to enable teachers participate in professional learning communities ($M=4.16$ $SD=0.974$), remind the teachers to focus instructional strategies on high order thinking and problem solving ($M=4.22$ $SD=0.867$), determine that classroom instruction reflects teacher's high level pedagogical content knowledge to challenge all learners' conceptions ($M=4.11$ $SD=0.891$).

The descriptive results indicates a high mean 4.16 ($sd=.913$; $min=1$; $max=5$) which suggests that promotion of professional development of teachers contributes to improvement in learning outcomes in K.C.S.E. However, they did not allow for the understanding of how professional development programmes contribute to learning outcomes,

therefore, the qualitative results were applied to generate rich information to shed light on this phenomenon. For example, during the interviews about influence of principals' promotion of professional development of teachers and learners' academic performance in K.C.S.E., with the principals, the respondents had this to say;

One of the principals noted that;

In my school, we have deliberate programme of curriculum implementation which starts with preparation of professional records by the teachers, followed by classroom teaching, learners' evaluation and ends with analysis of teachers' and learners' performance. At this point, weaknesses in performance of teachers and learners are identified to inform school based C.T.P.D. which will address specific school needs to produce good academic results (15).

In contrast, a male principal of Sub-County school reported that C.T.P.D. programmes have contributed marginally in teachers' job performance because they are not school based. He said that:

Many C.T.P.D. attended by teachers are organised by the government without considering school specific needs. However, in few instances where school based ones are organised, some progress in learners' academic performance have been noted (P10). These results resonate with the findings of Silva and Oliveira (2020) which exposed that C.T.P.D. improved the teaching skills of teachers and students' learning outcomes through the Pedagogical Support Groups and those Borna et al., (2023) and Hervie and Winful (2018) which agree that promotion of teacher professional learning communities improves student achievement.

F. Correlation between Principals' Promotion of Professional Development of Teachers and Learners' Academic Performance in K.C.S.E.

Pearson's Product Moment Correlation test was run to establish the influence of principals' promotion of

professional development of teachers on learners' academic performance in K.C.S.E. To obtain it, a simple coefficient of correlation was computed and results are shown in Table 4.

Table 4: Pearson Correlation Analysis to Explore the Influence of Principals' Promotion of Professional Development of Teachers on Learners' Academic Performance in K.C.S.E.

		Promotion of Professional Development	KCSE MEAN SCORE
Promotion of professional development	Pearson Correlation	1	-.011
	Sig. (2-tailed)		.821
KCSE MEAN SCORE	Pearson Correlation	-.011	1
	Sig. (2-tailed)	.821	

Source: Field Data, (2023)

According to table 4, there is a weak negative relationships between promotion of professional development of teachers and learners' academic performance in K.C.S.E. ($r = -.011$, $p > 0.05$; 2-tailed). This finding agrees with others which explain in part why several recent P.D effectiveness studies did not find considerable direct effects of participation in C.T.P.D on student achievement (Leithwood, 2019). The finding imply that the principals should connect professional development of teachers to improvement in academic performance by ensuring that all professional development courses attended by teachers address school needs (Darling-Hammond, 2017). According to the interviews the respondents were of the feeling that a lot of impact from professional development programmes would improve academic performance if the school contextual need are considered. One of them noted:

When a compare changes in teachers classroom behaviours after external arranged C.T.P.D. and those ones that are organized by the school, I find that the later has more benefit to school than the former because there is room for my teachers to interact at departmental level having starting INSET from the base of school needs(P9).

G. Hypothesis Testing

The objective of the study aimed at exploring the influence of principals' promotion of professional development on learners' academic performance in K.C.S.E. in Kisii County. Based on this objective, the following hypothesis was tested.

H₀₁ Principals' promotion of professional development of teachers does not influence learners' academic performance in K.C.S.E. in Kisii County.

A simple linear regression model developed by the researcher was used to find out the influence of principals' promotion of professional development of teachers on learners' academic performance in K.C.S.E. which are the predictor and outcome variables respectively. The linear regression model is expressed as:

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

Where,

Y = Learners' academic performance in K.C.S.E.

β_0 = Constant term, that is the predicted value of learners' academic performance if principals' promotion of professional development of teachers is zero.

β_1 = Beta coefficient (contribution of principals' promotion of professional development of teachers on learners' academic performance.

X_1 = Principals' promotion of professional development of teachers.

ϵ = Standard error (other variables that may influence learners' academic performance but are not included in the model and are assumed not to interfere with principals' promotion of professional development of teachers for example principals' social capital.

H. Regression Analysis and Hypothesis Testing

The direction of the relationship between promotion of professional development of teachers and students' performance in K.C.S.E was also analysed. Table 5 presents the coefficients and model summary.

Table 5: Regression Results of Promotion of Professional Development of Teachers and Learners' Academic Performance in K.C.S.E. Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.011 ^a	.000	-.002	25.23468	.000	.051	1	412	.821

a. Predictors: (Constant), Principal's promotion of professional development

b. Dependent Variable: KCSE MEAN SCORE

Source: Researcher, (2023)

From Table 5, it can be observed that promotion of professional development of teachers had a weak positive influence on academic performance in K.C.S.E. but was insignificant, ($r = .011$, $N = 412$, $p > .05$; 2 tailed). Therefore the null hypothesis that principals' promotion of professional development of teachers do not influence learners' academic performance in K.C.S.E. was upheld and the alternative hypothesis promotion of professional development of teachers influence learners' academic performance in K.C.S.E. was rejected. The finding of this study concurs with Hervie and Winful (2018) study in Ghana which revealed that poor performance of teachers was due to lack of frequent in-service training and Khalid et al., (2021) in Pakistan which discovered that teachers' advanced knowledge is insignificant on students' academic performance. Contrastingly, the study of Osei-Owusu (2022) in Ghana found out that teachers' professional development had a weak positive influence on academic performance and attributed the weak contribution to the fact that it usually takes time for teachers to incorporate newly learnt knowledge into practice and so it may take time to realize the full impact on improvements of professional knowledge accounted by attendance of professional development programmes.

During the interviews, the respondents mentioned that there are other factors that may also affect academic performance in a school set-up and C.T.P.D. courses have not yielded positive results in the study locale because of contextual challenges.

One of them said:

Lack of considering school needs when designing C.T.P.D. programmes, over enrolment in most of schools and teacher negative attitude to share course content at school level with colleagues have contributed too little impact of the courses on learning (P8).

Likewise, the professional development done in the Secondary schools might not be effective in contributing in high quality learning outcomes because they are mostly influenced by teachers' own private arrangements and sponsorship and not school contextual needs (Ozdemir, 2020).

The study also investigated the prediction of promotion of professional development of teachers on learners' academic performance in K.C.S.E. The results are presented in table 6.

Table 6: Analysis of Variance of Principals' Promotion of Professional Development of Teachers and Learners' Academic Performance in K.C.S.E

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.738	1	32.738	.051	.821 ^b
	Residual	262357.008	412	636.789		
	Total	262389.746	413			

a. Dependent Variable: KCSE MEAN SCORE

b. Predictors: (Constant), Principal's promotion of professional development

Source: Field Data, (2023)

Table 6 indicates that principals' promotion of professional development of teachers was not a significant predictor of learners' academic performance in K.C.S.E [$F(1, 412) = .051$, $p > 0.05$]. This means that principals' promotion of professional development of teachers does not predict learners' academic performance in K.C.S.E. in the study locale. The findings of this study concurs with (Irungu et al., 2019) which found out that participation in professional has not provided sufficient evidence to link it with its effectiveness. Contrastingly, the studies of Akpem (2021) in Ghana which identified that professional development of teachers significantly contribute to academic performance. As identified by the findings of this study, it can be concluded that professional development would significantly contribute to academic performance if they are based on school contextual factors such as teachers' needs and content specific (Grissom et al., 2021) as was confirmed by the interviews when one of the participants noted;

Considering school instructional needs, professional weaknesses of each teacher and challenging topic areas in each subject area may contribute immensely when designing course contents so as to aid in improving teachers professional knowledge and pedagogical knowledge (P11).

The study also investigated the contribution of principals' promotion of professional development of teachers on learners' academic performance. The results are shown in table 7.

Table 7: Linear Regression Analysis to Explore the Contribution of Principals' Promotion of Professional Development of Teachers on Learners' Academic Performance in K.C.S.E.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	6.757	7.997		.845	.399	-8.962	22.477
	Influence of principals' promotion of professional development of teachers on learners' academic performance in K.C.S.E.	-.431	1.902	-.011	-.227	.821	-4.171	3.308

a. Dependent Variable: KCSE MEAN

Source: Field Data, (2023)

Table 7 indicates that promotion of professional development of teachers which is $Y = 6.757 + -0.431X_1$, means that for every one unit increase in promotion of professional development of teachers, there was a decrease in academic performance in K.C.S.E. by -0.431 units. These findings concur with (Irungu et al., 2019) which found out that professional development of teachers do not significantly contribute to learning outcomes in K.C.S.E in Muranga and Kirinyaga Counties. Thus it indicates that simply applying professional development programmes without planning for context specific activities may not result in a positive change in academic performance in K.C.S.E. (Habler et al., 2020). This result was confirmed by the interviews of the principals who explained that;

Heavy workload held by the principals hinders implementation of C.T.P.D programmes especially at monitoring and evaluation stages. Coupled with inadequate teaching and learning resources to put in practice what teachers learn in the classrooms, may contribute to little impact on learning outcomes (P3).

Other research findings have reported that lack of teaching and learning materials hinders implementation of teaching programmes after professional development activities (Borna et al., 2023).

I. Phase 2- Qualitative research findings

The research objective was to determine the influence of Principal promotion of professional development of teachers on learners' academic performance in K.C.S.E. This objective had two research questions. The first research question was; how principals as instructional leaders promote teacher professional development? While the second research question was; how does this contribute to improving learners' academic performance?

On the first research question how Principals as instructional leaders promote teacher professional development in their respective schools, one Principal had this to say:

Teacher professional development is very critical in enhancing teacher quality to deliver the curriculum and on this, on my disposal, the school encourages departmental meetings and lesson study at school level. While outside the school, we engage in bench marking with other schools to

help teachers exchange ideas, experiences and learn how to overcome challenges faced during curriculum delivery. (P16)

Another Principal added that:

Teachers often attend in-service courses to build their capacity but it is often faced with; financial challenges because in many cases, teachers sponsor themselves and mismatch between identified gaps in teacher capacity, school curriculum needs and the courses teachers attend. (P3)

On the contribution of professional development programmes on learners' academic performance, interviewees were of the opinion that teacher capacity building through various courses attended whether internally or externally are beneficial to the learners when they address teachers' professional gaps and school curriculum needs. One Principal noted that:

In departmental meetings, my Heads of Departments (HoDs) meet with the subject heads to find out school needs and link the same with identified teacher performance gaps to help in programming lesson study, bench-marking and school INSETS. It has really enabled the school to implement professional development programmes strategically with good academic results (P14).

However, it was learnt that teachers majorly choose independently which professional development programmes to attend and when to attend them because they sponsor themselves so schools have very little control on what they learn. One Principal indicated that:

Schools have not benefited much from many of the in-service courses teachers attend because they do not address school needs but teachers' personal need such as career progression and not classroom practices. Moreover, the courses are not sustained for a considerable long time to allow teachers practice and review their practices from what they learn as is the recommended practice. Thus their contribution on learners' progress has not been so much felt (P8).

J. Quantitative and Qualitative Results Triangulation Matrix

The results of integration at interpretation stage are presented in table 8 in form of a matrix.

Table 8: Quantitative and Qualitative Results Triangulation Matrix

No	Objective and Hypotheses	Quantitative Results	Qualitative Results	Inferences
1	To explore the influence of principals' promotion of professional development on learners' academic performance in K.C.S.E. in Kisii County. H ₀ 2 Principals' promotion of professional development does not influence learners' academic performance in K.C.S.E. in Kisii County.	- a weak negative relationships between promotion of professional development of teachers and learners' academic performance in K.C.S.E ($r = -.011$, $p > 0.05$; 2-tailed). - had a weak positive but insignificant influence on academic performance in K.C.S.E, ($r = .011$, $N = 412$, $p > .05$; 2 tailed). Therefore the null hypothesis was upheld. This finding agrees (Jacob and McGovern, 2015; Leithwood, 2019; Borna et al., (2023)) but contrary to Muragura et al., 2022; Ajani et al., 2018; (Ozdemir, 2020).	Schools have not benefited much from many of the in-service courses teachers attend because they often address teachers' personal need such as career progression and not classroom practices.(P8).There is mismatch between what teachers learn in parallel course programmes and the school needs which has led to little or no contribution to teacher skills and learning (P14).	It seems to suggest that P.D have not resulted in improved learning outcomes because they are not in line with school needs. Habler, et al. (2020) indicates that without a sustained and iterative approaches in light of learning such as combining several activities that are threaded to promote teachers' learning, academic performance may not be promoted.

Source: Researcher, (2023)

According to table 8, inferential statistics obtained during the quantitative phase using Pearson's correlation coefficient method and linear regression analysis on Principals' promotion of professional development of teachers and learners' academic performance in K.C.S.E. show that the two variables were not significantly related. The qualitative results was in affirmative with quantitative findings in the sense that principals interviewed in the qualitative phase affirmed that professional development courses which teachers attend did not contribute to a great extent on learners' academic performance in K.C.S.E. in Kisii County because in most of the cases teachers attend them for career progression only and not to improve their instructional capacity in the classrooms. Explanations by interviewees further revealed that such courses are not sustained over a long time to give teachers room to share and experiment their experiences even for those courses that are intended for improving learning outcomes.

V. CONCLUSION

The objective of this study was to explore the influence of Principals' promotion of professional development of teachers and learners' achievement in K.C.S.E. The quantitative results revealed that promotion of teachers' professional development had a weak negative insignificant relationships with learners' academic performance in K.C.S.E. ($r = -.011$, $p > 0.05$; 2-tailed). Similarly, it had a weak positive influence on academic performance in K.C.S.E but was insignificant, ($r = .011$, $N = 412$, $p > .05$; 2 tailed). Furthermore, it is not a significant predictor of learners' academic performance in K.C.S.E. [$F(1, 412) = .051$, $p > 0.05$]. Correspondingly, result indicates that promotion of professional development of teachers which is $Y = 6.757 + -0.431X_1$, means that for every one unit increase in promotion of professional development of teachers, there was a decrease in academic performance in K.C.S.E. by -0.431 units. Qualitative results supported these findings since the respondents unanimously agreed that attendance of

professional development programmes do not influence academic performance because teachers who attend the programmes do so without considering school contextual needs. Both quantitative and qualitative findings show that promotion of professional development of teachers is associated with learners' academic performance in K.C.S.E. but it could not significantly predict learners' academic performance in the study locale. Consequently, there was insignificant association between promotion of teachers' professional development and learners' academic performance in K.C.S.E. Thus, it was concluded that for teacher professional development to have a significant contribution to learners' academic performance, it should be informed by feedback from T.P.A.D. programmes and school instructional needs.

RECOMMENDATIONS

Professional Development programmes should aligned to the contextual needs of the schools such as the needs of the teachers and learners to enable them be effective in improving learning outcomes. Similarly, they should embrace the use of self-directed technologies to increase accessibility and retention of participants regardless of distance and time to complement and extent the standardized and site-based learning. This would allow the teachers to embrace use of technology to inculcate competencies such as collaboration, communication and problem solving among learners.

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