



INFLUENCE OF PROFESSIONAL DEVELOPMENT ON TEACHERS' PERFORMANCE IN SECONDARY SCHOOLS IN UASIN GISHU COUNTY, KENYA

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ABSTRACT

The quality of education depends on how skilled and motivated teachers are to improve their professional knowledge and skills throughout all their career for sustained performance. In this regard there has been a growing and continuous demand for teachers to improve their knowledge and skills on curriculum and teaching methodology through professional development strategies. However, gaps in teacher's professional development is a worldwide problem. This calls for the development of teachers beyond their initial training. In this regard the study focused on the effect of professional development on teachers' performance. In order to successfully accomplish the objective, the study used an explanatory research methodology. The teachers from 248 public secondary schools were the target demographic. The target population was 2262 teachers from 248 public secondary schools in Uasin Gishu County. Taro Yamane (1967) formula was used to determine the study's sample size of 340 teachers. Data was collected using a questionnaire which was tested for validity and reliability after pre-testing in Nandi County. Data was analysed inferential and descriptive statistics Using SPSS version 20. From the findings formal professional development ($t = 12.292, P < .05$) and informal professional development ($t = 2.075, P < .05$), implying that all the professional development strategies significantly affected teachers' performance in public secondary schools in Uasin Gishu County. All the two professional development strategies understudy (informal and formal professional development) jointly explained 56.5 percent variation on teachers' performance. In this regard the public secondary schools should encourage teachers' professional development strategies for maximal teacher performance through a policy framework.

Key words: Professional Development and Teachers' Performance

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INTRODUCTION

Globally, quality of education is the bedrock of higher rates of innovation and invention which remains the central pillar of the Millennium Development Goals. The realization of quality education is largely dependent on the quality of teaching manifested by continuous professional development opportunities available to teachers. This is underscored by Gopinathan (2016) who notes that professional development and teachers' effectiveness have a positive impact on school reforms and increased quality of learning. Therefore, the link between professional development and teachers' performance cannot be gainsaid. In this regard professional teachers are able to educate their students with various efforts through various strategies and learning models according to the students' conditions (Asiyah *et al*, 2021).

Analysis of the costs and benefits of school reform clearly shows that investments in professional development for teacher performance to improve the quality of schools offer exceptional rewards to society. This argumentation has been asserted by Asiyah *et al*, (2021) who notes that professional development of a teacher by improving work commitment and innovative work improves teacher performance which produces competitive human resources. Teacher performance is the set of actions, attitudes, and behaviors in the teaching-learning environment that results in achieving educational goals for students (Andrea, 2022). Simply put, what a teacher does, or does not do, in the classroom impacts hugely on how effectively students advance in their learning process. Teacher performance is essential for the effective operation of the education system and improvement of the quality of learning process. Riaz (2000) measured teachers' performance on such factors teaching competence demonstrated, motivational skills, teachers' attitude toward students and fairness in grading. Teachers, therefore, need to be competent in the content as well as in the way to deliver that content (Smith *et al*, 2002) in order to facilitate learning. This inspires the need for continuous professional development

amongst teachers to spur heightened performance in their teaching career. Teachers' competence can be improved through professional development programs that boost their teaching competencies and enable them to deliver in the midst of chaotic education settings common these days, and achieve the desired educational goals.

Professional development is the strategy schools use to ensure that educators continue to strengthen their practice throughout their career (Hayes, 2010). The most effective professional development engages teams of teachers to focus on the needs of their students. They learn and problem solve together in order to ensure all students achieve success. Some of the teacher professional development activities include: skills development, new knowledge acquisition, improving expertise, and individual characteristics (Hollins, 2011). Continued Professional Development (CPD) suggests that learning could take place in three dimensions, namely formal learning (FL), non-formal learning (NFL) and informal learning (IL) (Fadilah, 2017). The professional development of teachers may help teachers to adapt their instruction strategies to student level. A fundamental criterion of quality of proposed professional development is its effect on student performance Martínez *et al*. (2022) which is an index of teacher performance. Professional development is significantly associated with an increased teacher self-efficacy thus teacher performance (Yang, 2020). (DeMonte, 2013) and (Caena, 2011) where professional development affects the quality of learning. With professional development, the way students learn will be better. Professional teachers are able to educate their students with various efforts through various strategies and learning models according to the students' conditions. Policymakers, community leaders, and parents have a responsibility to ensure that educators within their schools engage in continuous professional learning and apply that learning to increase their performance through sustained student achievement (Hayes, 2010).

Dubeck, et al (2015) notes that the optimal way to encourage teachers to provide instruction that is aligned with current understandings remains an open question. In Kenya, the Teachers' Service Commission (TSC) envisaged that through the appraisal system teachers would be empowered through professional training once their performance gaps were identified (Kariuki, 2020). This would help them retain the lost glory of the teaching profession and earn public confidence as professionals interms of their performance. The TSC Handbook (2015) explains that Teachers Service Commission rolled out Performance contracting for head of institutions and Teacher Performance Appraisal and Development for all teachers. However, the appraisal report is not used in professional development of teacher. Besides, there continues to be limited information beyond this basic relationship between professional development and teachers' performance in secondary schools. From an HRD perspective, research on professional development seems an area of high importance. However, a few studies like Harbison and Hanushek, (1992) found no beneficial relationship between professional development and teacher performance interms of student achievement. Yang (2020) adds that these associations do not hold for the most common types of professional development, such as courses/workshops and conferences/seminars. In addition, rural school teachers are more likely to benefits from professional development than teachers in large cities. These altogether motivated the need of this study

Problem statement

The development agenda of Kenya is hinged on the provision of quality education. However, A World Bank report highlighted by Ngugi (2016) shows that learners in Kenya are cheated out of education as teachers do not have the adequate preparation and do not cover the syllabi. Besides, many teachers lack confidence in their abilities to improve student learning, even when they rate themselves as professional and considerate of their students'

needs (Onderi & Croll, 2009). Other teachers may be dedicated to their profession but recognize that they do not have the necessary pedagogical knowledge to influence all students' achievement (Dubeck et al., 2012). Therefore, Professional development for teachers has been a trending phenomenon in the education sector in Kenya for enhancing teacher performance interms of effective teaching and learning (Mailo, *et al*, 2022). This is coupled by the aspirations of Teachers' Service Commission (TSC) that through the appraisal system teachers would be empowered through professional training once their performance gaps were identified (Kariuki, 2020). However, the appraisal report is not used in professional development of teacher. Besides, there continues to be limited information beyond this basic relationship between professional development and teachers' performance in secondary schools providing a motivation of this study.

Objectives of the study

The general objective of this study was to determine the effect of professional development on teachers' performance in secondary schools in Uasin Gishu County. The study was guided by the following specific objectives;

- To analyze the effect of informal professional development on teachers' performance in secondary schools in Uasin Gishu County
- To asses the effect of formal professional development on teachers' performance in secondary schools in Uasin Gishu County

LITERATURE REVIEW

Professional Development and Teachers' Performance

Professional development opportunities provide today's employees with an opportunity to maintain and obtain the skills required for their current jobs – as well as steps up in their career path (Price & Reichert, 2017). For any education institution to achieve its goals it must ensure the quality of its teachers by training and re-training them. The truant nature of public secondary school teachers as

exhibited in their poor attitude towards instructional duties; lateness to work, inconsistent attendance to school or classes, poor record keeping attitude, and their poor disciplinary attitudes, is a pointer to the fact that many teachers are ineffective in their job performance (Festus, Valentine, & Esther, 2019). However, Bhatti and Qureshi cited in Anlesinya, Bukari and Eshun (2014) stated that one of the leading challenges in management has been implementing effective employee development programmes to enhance performance. Kongo (2011) argued that employee development improves the knowledge base of organizations members, a precursor of organizational performance. However, Gaps in teacher's professional development is a worldwide problem. Professional development covers a wide range of activities, including, conferences training courses, tertiary study, study groups and observed practices (Watene, Jepkemboi & Kodak, 2020).

Zhaohui and Anning (2020) explored the impact of teachers' professional development on students' academic performance in higher education. Survey questionnaires were used to solicit views from 298 teachers who participated in the study. Confirmatory Factor Analysis and Structural Equation Model were used to analyze the data. It was found out that teachers at Jiangsu University were familiar and interested in some specific Professional Development (PD) programs namely: Courses and Workshops, Reading of Professional Literature, Education Conferences and Seminars, Individual and Collaborative research, Observation visits to other Universities, Conflict Management, Classroom Management and Building Students' Engagement. It was revealed that teacher professional development programs attended within the past three years have improved teachers' research abilities and instructional methods. It has also improved students' outcome significantly according to the teachers. However, it was found out that some factors prevented teachers from participating in the PD programs. Among other things, it emerged that there is lack of employer's support and that there is

a kind of friction between professional development and work schedule. Relevant suggestions have been given to address this challenge. However the study was not conducted in high schools in the Kenyan context.

Manggis, Yuesti and Sapta (2018) studied the effect of Career Development and Organizational Culture to Employee Performance with Motivation of Work as Intervening Variable in Cooperation in Denpasar Village. The purpose of this study was to know and examine the influence of career development, organizational culture on employee performance in cooperative in rural village, to know and test the influence of career development and organizational culture on employee motivation at cooperative. To know and to test influence of work motivation to employee's performance at Cooperative in rural village. This research was quantitative research using primary data obtained from the questionnaire and measured by using Likert scale. The population of this research was employees at Cooperative in rural village as many as 85 people. Data analysis technique used in this research is Structural Equation Modeling (SEM) based on Partial Least Square (PLS) using SmartPLS 3.0 program. The result of the research shows that ,career development has positive and significant effect to work motivation, organizational culture have positive and significant effect to work motivation, career development have positive and significant effect to employee performance and the influence of mediation of work motivation variable on indirect influence of career development on partial performance and influence of mediation of work motivation variable on the influence of unbalanced direct organizational culture to performance is partial. However the study didn't focus on learning institutions to bring out teachers performance.

Alsharif and Geetanjali (2017) investigating the impact of training and development on employee performance and productivity in Jumhuria bank. Interviews were conducted with employees. It was observed that there was a lack of a comprehensive system for assessing the training needs, participant

selection and effective procedures for their evaluation. Further the evaluation of training was poor and only for namesake. Also, rather than playing highly proactive role training was just reactive in nature. It was also found that training and development was highly relevant and effective in improving the staff member's knowledge, skills, behavior and attitudes. training did not have any impact over innovation, absenteeism, job turnover rate and job satisfaction. Nevertheless, training increased the employee's job performance and productivity. It was observed that the process of training and development was associated with various problems.

Anlesinya, Bukari and Eshun (2014) the purpose of this study is to investigate the effect of employee development on organizational performance in Ghana's public sector, using the experience of Controller and Accountants General's Department (CAGD). The relevant data for the study were collected from CAGD employees, Accra, using a cross-sectional survey design. Sixty-five employees were selected for inclusion in the study using convenience sampling method. In order to achieve the research objectives, the researchers used Pearson's correlation and simple linear regression as analytical tools to analyze the data. The research hypothesis tried to determine if employee development would have significant and positive effect on organizational performance. The result indicated that employee development has a significant negative effect on organizational performance. This research outcome contrasts the overwhelming significant positive effect found by previous empirical studies in the area. However, the study focused on organizational performance as an outcome of employee development besides being conducted in a non-academic institution.

Dialoke and Nkechi (2017) focused on the effects of career growth on employees' performance with reference to the Non-academic Staff of Michael Okpara University of Agriculture Umudike in Abia State, Nigeria. Beyond the broad objective, the study sought specifically to determine the effect of career

development on the employees' performance and ascertain the effect of career advancement on the motivation of Non-academic Staff of Michael Okpara University of Agriculture Umudike. The researcher adopted survey research design, both primary and secondary sources of data was used. The population of the study consisted of all the Non-academic Staff of the university which numbered two thousand six hundred and thirty (2630) employees, using Taro Yamane's formula at a normal confidence level of 95% and error tolerance of 5%, the sample size of the study was reduced three hundred and forty six (346). Simple random sampling techniques were used to sample the respondent. Pearson Product Moment Correlation analysis was use to analyses the objectives with the aid of Statistical Packages for Social Sciences (SPSS) version 20. The major findings revealed that there is a positive and significant correlation between career development and the performance of the Non-academic Staff of the university, and also career advancement is positively correlated with motivation of the Nonacademic Staff of the University. However the study was limited to nonacademic staff limiting its generalization to the teachers in secondary schools.

Watene, *et al*, (2020) examined the effect of teacher professional development on academic performance of public secondary schools in Nyandarua County in Kenya. Descriptive survey research design was adopted for the study. The study was anchored on Leadership Practices and Classroom Instruction Theory. Questionnaires were used to collect data from principals, teachers, and students. The study targeted all public secondary schools in Nyandarua County. Stratified random sampling technique was used to select individual respondents. The study sample was a total of 384 principals, teachers, and students, equally drawn from the 167 public secondary schools in the county. Descriptive analysis was used in conducting data analysis. This study found that there exists an association between the academic performance of a school and teachers' professional development. However, the study focused on performance of

students in KCSE an not performance of the teachers. Besides the study was conducted in Nyandarua county and not Uasin Gishu county.

Eveline and Demetria (2021) sought to find out the Influence of Teacher's Professional Development Practices on their Job Performance in Nyamagana District, Mwanza Region. The study employed convergent parallel design under the mixed methods approach to help collect and analyze both quantitative and qualitative data strands. Stratified random sampling and simple random sampling techniques were used to sample public secondary schools and teachers while purposive sampling techniques were used to sample heads of schools and the District Education Officer. Data was collected through the use of questionnaires and in-depth interview guides. The quantitative data was analyzed with the aid of Statistical Package for Social Sciences (SPSS) while qualitative data were analyzed through thematic analysis of the specific objectives. The findings revealed that training the workforce (teachers) has the most impact on different dimensions like; improvement of teaching strategies, reduces teachers' burnout, stress and turnover, improves teachers' effectiveness and improves overall teacher's personnel. However, the study was conducted in a Tanzanian context limiting its generalization to Kenya secondary schools.

Kongo (2011) the study therefore sought to assess the impact of performance appraisal in facilitating secondary school teacher professional development Kitui West district. The objectives of the study were to: investigate the nature and strategies of performance appraisal in public secondary schools; find out ways in which performance appraisal information is used in teacher professional development and investigate the emerging issues and challenges in teacher performance appraisal in relation to professional development. The study was based on performance appraisal model. Data was collected using questionnaires for the principals and for teachers while an interview schedule were used on the DEO and the DQASO. Descriptive statistics were used to analyze the quantitative data obtained.

The statistics used included frequency counts, means, and percentages. The study established that the TSC did not give teachers feedback on their performance, therefore making them not improve their performance. It was also established that the head teachers appraised teachers to identify areas where performance was below standard and also to discover their strengths and weaknesses. The study further established that the most common hindrances to effective performance appraisal were: lack of finances, poor TSC services, time factor, lack of sponsors and family commitments. However, the study focused on professional development as the outcome of performance appraisal. Unlike the current study looking at professional development as a predictor of teacher's performance in secondary schools.

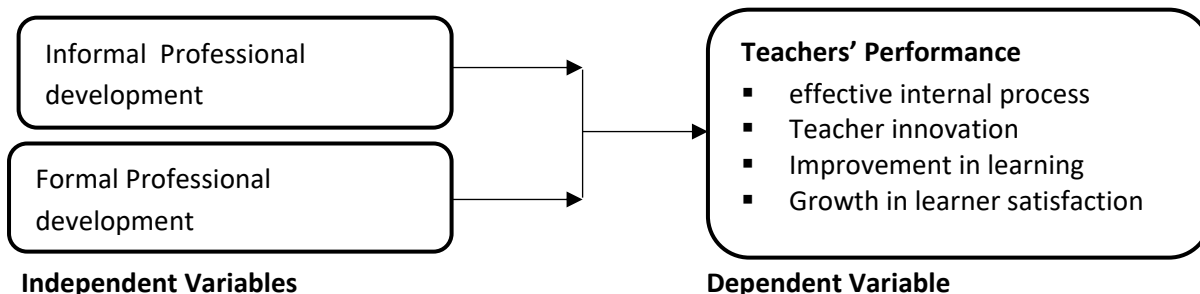
Adika and Mung'ala (2018) studied the effect of in-service teachers' training on performance of teachers in public secondary schools, Nairobi County. The study's specific objectives were to identify the effect of training needs on performance of teachers and to examine the strategies used in conducting in-service training and their effects on performance of teachers in public secondary schools in Eastleigh Zone, Nairobi County. The teachers' performance was measured using the Balanced Score Card and other perceptual measures such as managerial performance, customer service orientation, and productivity and work quality. The study adopted descriptive research design. All 144 teachers were considered in the study hence census survey. The instruments used in the study were a questionnaire and an observation checklist. Reliability test was carried out using Parallel Forms model. Descriptive statistics were employed in the study. The study found out that there was significant effect of in-service teachers' training on teachers' performance as stated by majority of the respondents in the study. 70.3% agreed that training needs affected teachers' performance; and 100% agreed that the training strategies affected teachers' performance. However, this study was conducted in

Nairobi County and not Uasin Gishu County providing a gap for the current study.

Conceptual Framework

A conceptual framework is an analytical tool with several variations and contexts. It can be applied in different categories of work where an overall picture

is needed (Ullah, 2021). The study conceptualized the effect of professional development and teacher’s performance as presented in figure 1 below. The professional development styles were the independent variable while teacher’s performance was the dependent variable.



Independent Variables

Dependent Variable

Figure 1: conceptual frame work for Professional development and teachers Performance

Source (Author, 2022)

METHODOLOGY

Research Design: This study adopted explanatory research design to increase an understanding on the study variables.

Study Population: The study's accessible population was 2262 teachers from Uasin Gishu County's 248 public secondary schools (kicd.ac.ke. 2019)

Table 1: Target Population

Respondents	Accessible Population
Soy	381
Turbo	372
Moiben	322
Ainabkoi	390
Kapseret	425
Kesses	372
Total	2262

Source: (kicd.ac.ke., 2019).

Sampling Techniques and Sample Size: This study employed stratified random sampling, proportionate, simple random sampling techniques to select the respondents to be included in the

sample. Kerjcie and Morgan (1970) formulae for determining the sample size which was 340 respondents

Table 2: Samle Size

Respondents	Accessible Population	Sample Size
Soy	381	57
Turbo	372	56
Moiben	322	48
Ainabkoi	390	59
Kapseret	425	64
Kesses	372	56
Total	2262	340

Source: (kicd.ac.ke., 2019).

Research Instruments: a research instrument is a tool used to collect, measure, and analyse data related to your research interests (Kothari & Garg, 2014). The study used questionnaires for data collection. Piloting involved 10% of the size of the sample which was 34 questionnaires which was done in Secondary Schools in Nandi County. Few corrections were made on wording, layout, sequencing, validity and reliability of the questions before the final draft disseminated to the respondents.

Data Analysis: Data analysis involved organization, interpretation and presentation of collected data in order to reduce the field information to a usable size (Guest & Marilyn, 2013). Data was analysed by use of inferential statistics. Inferential statistics is concerned with the cause-effect relationships between variables and uses various tests of significance for testing hypotheses. This study used regression analysis.

Multiple regression analysis was applied to analyze the relationship between a single dependent variable and several independent variables (Nathans, Oswald, & Nimon, 2012). The model was as follows;

$$y = \beta_0 + \beta_1 X_1 Z + \beta_2 X_2 Z + \varepsilon \dots \dots \dots \text{(Model 1)}$$

Equation 1 shows the relationship between the predictors X_1 to X_2 , which are professional development and teacher's performance which is Y .

Where, y = teachers' performance

β_0 = Constant (Value. of change in y when $x = 0$)

β_1 and β_2 represents the regression coefficients describing the degree of change in independent variable by one-unit variable.

X_1 Informal professional development

X_2 Formal professional development

ε Error term (the residual error, which is an unmeasured variable)

All the above statistical tests were analysed using the Statistical Package for Social Sciences (SPSS), version 25

FINDINGS AND DISCUSION

Effect of Informal Professional Development on Teachers' Performance

The study conducted a simple linear regression analysis to answer to objective one which sought the effect of informal professional development on teachers' performance. The results are presented in Table 3 below.

Table 3: Effect of Informal Professional Development on Teachers' Performance
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.745 ^a	.556	.553	.37947	1.748

a. Predictors: (Constant), Informal professional development

b. Dependent Variable: Teachers' Performance

Coefficients^a

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	1.307	.168		7.779	.000
	Informal professional	.622	.039	.745	15.889	.000

a. Dependent Variable: Teachers' Performance

Source: Research study 2022

The model summary results in Table 3 indicated that there is a strong positive correlation between

informal professional development and teacher performance ($R=0.745$). The coefficient of

determination (R square) of .556. This indicated that the model explained only 55.6 percent of the variation or change in the dependent variable. The meaning is that when a deliberate effort is put to ensure informal professional development will certainly cause a variation on teacher's performance. The remaining proportion of 44.4 percent can be explained by other factors other than informal professional development. Adjustment of the R square did not change the results substantially, having reduced the explanatory behavior of the predictor from 55.6 percent to 55.3 percent. This means that the model is fit to be used to generalize the findings. This implies that when the secondary schools should strategically embraces informal professional development then the level of teachers performance is likely to vary.

An unstandardized coefficient represents the amount of change in a dependent variable Y due to a change of 1 unit of independent variable X (Hayes & Preacher, 2014). Therefore, a coefficient of .622 indicated that a unit change in informal professional development leads to .622 units of positive change in teachers performance. Therefore, informal professional development and teachers performance model can now be presented as follows:

$$Y=1.307+.622X_1+\epsilon \dots\dots\dots 2.$$

T-test was used to identify whether the predictor was making a significant contribution to the model. Since the t-statistic is significant, the study concluded that informal professional development was significant (p-value = 0.000) in positively influencing teachers' performance in secondary schools in Uasin Gishu County. These findings are supported by Richter, *et al*, (2011); Oskars (2019) who also found a positive and significant effect of informal professional development on of teacher's performance. This implies that secondary schools should adapt as well as craft their informal professional development strategies to the needs of the teachers and the students for a positive teaching outcomes in consequence. Therefore, this study submits that informal professional development remains a vital determinant of teacher's performance.

Effect of Formal Professional Development on Teachers' Performance

The study conducted a simple linear regression analysis to answer to objective two which sought the effect of formal professional development on teachers' performance. The results are presented in Table 4 below.

Table 4: Effect of Formal Professional Development on Teachers' Performance Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.488 ^a	.238	.234	.49694	1.540

a. Predictors: (Constant), Formal professional development
 b. Dependent Variable: Teachers' Performance

Coefficients^a

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	2.164	.227		9.531	.000
	Formal professional	.447	.056	.488	7.937	.000

a. Dependent Variable: Teachers' Performance

Source: Research study 2022

The model summary results in Table 4 indicated that there is a strong positive correlation between informal professional development and teacher performance (R=0.488). The coefficient of determination (R square) of .238. This indicated that the model explained only 23.8 percent of the variation or change in the dependent variable. The meaning is that when a deliberate effort is put to ensure formal professional development will certainly cause a variation on teachers' performance. The remaining proportion of 76.2 percent can be explained by other factors other than formal professional development. Adjustment of the R square did not change the results substantially, having reduced the explanatory behavior of the predictor from 23.8 percent to 23.4 percent. This means that the model is fit to be used to generalize the findings. This implies that when the secondary schools should use formal professional development to improve on teachers performance . A coefficient of .447 indicated that a unit change in formal professional development leads to .447 units of positive change in teachers performance. Therefore, formal professional development and teachers performance model can now be presented as follows:

$$Y=2.164+.447X_1+\epsilon \dots\dots\dots 3.$$

Since the t-statistic is significant, the study concluded that formal professional development was significant (p-value = 0.000) in positively influencing teachers' performance in secondary schools in Uasin Gishu County.

These findings are supported by Zhaohui and Anning (2020); Watene, Jepkemboi and Kodak, (2020) who also found a positive and significant effect of formal professional development on of teachers performance. This implies that secondary schools must ensure the quality of its teachers by training and re-training them through formal professional development strategies for a positive teaching outcome in consequence.

Effect of Professional Development on Teachers' Performance

The study conducted a multiple linear regression analysis to answer to the general objective two which sought the effect of professional development on teachers' performance. The results are presented in Table 5 below.

Table 5: Effect of Professional Development on Teachers' Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.752 ^a	.565	.561	.37640	1.759

a. Predictors: (Constant), Informal and Formal professional development

b. Dependent Variable: Teachers' Performance

Coefficients^a

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	1.109	.192		5.771	.000
	Informal professional	.570	.046	.682	12.292	.000
	Formal professional	.106	.051	.115	2.075	.039

a. Dependent Variable: Teachers' Performance

Source: Research study 2022

The model summary results in Table 5 indicated that there is a strong positive correlation between professional development and teacher performance ($R=0.752$). The coefficient of determination (R square) of .565. This indicated that the model explained only 56.5 percent of the variation or change in the dependent variable. The meaning is that when a deliberate effort is put to ensure professional development will certainly cause a variation on teachers' performance. The remaining proportion of 43.5 percent can be explained by other factors other than professional development. Adjustment of the R square did not change the results substantially, having reduced the explanatory behavior of the predictor from 56.5 percent to 56.1 percent. This means that the model is fit to be used to generalize the findings. This implies that when the secondary schools should use professional development to improve on teacher's performance. A coefficient of .570 for informal professional development indicated that a unit change in informal professional development leads to .570 units of positive change in teachers performance. A coefficient of .106 for formal professional development indicated that a unit change in informal professional development leads to .106 units of positive change in teachers performance. Therefore, professional development and teacher's performance model can now be presented as follows:

$$Y=1.109+.570X_1+.106X_2+\epsilon \dots\dots\dots 4.$$

Since the t-statistic is significant, the study concluded that informal professional development and formal professional development was significant (p -value = 0.000) in positively influencing teachers' performance in secondary schools in Uasin Gishu County. These findings are supported by Alsharif and Geetanjali (2017) Watene *et al*, (2020) who also

found a positive and significant effect of professional development on of teacher's performance. This implies that secondary schools should bundle both informal and formal professional development through a policy framework for a positive teaching outcome in consequence.

CONCLUSION AND RECOMMENDATIONS

In conclusion professional development is a significant predictor for teacher performance. This is justified by the combined effect of both informal professional development and formal professional development on teacher performance. Professional development helps in shaping teacher's beliefs, practices and attitudes which remains important for understanding and improving educational processes for heightened performance. Courtesy of professional development they are teachers are able to coin strategies for coping with challenges in their daily professional life for positive educational outcomes. A blend of both informal and formal professional development strategies is a sure way of getting a synergistic teaching outcome. Thus, paying high premiums on both the professional development should be top on the agenda of the Teachers Service Commission and the management of secondary schools for continued improvement of teaching results. Besides the teacher's service commission should strengthen the use of TPAD, provide teachers with feedbacks on their performance gaps and help in the implementation of the professional development strategies to bridge the gaps. The TSC and the schools management should encourage self-initiated, voluntary learning activities at the workplace where mutual interaction between teachers helps to improve their knowledge and skills on specific issues as this is bound to impact greatly on teachers' performance. conferences, workshops, peer observations and narratives by colleagues.

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