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Original Article

### An Investigation into Collaborative Stakeholder Engagement's Effect on Teacher Professional Development Implementation in Kenya

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**Keywords:**  
*Implementation,  
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Teacher.*

Quality education is attributed to the quality of teaching. Teacher Professional Development (TPD) is vital towards improved quality of teaching in Kenya. To achieve this, Teachers Service Commission (TSC) rolled out TPD, whose successful implementation is at risk due to criticism from various stakeholders. This study sought to investigate the effect of stakeholder collaboration on implementation of TPD in Kenya. It adopted a descriptive survey study design. The study targeted a population of 327349 teachers from public schools and 188 TPD coordinators from accredited TPD service providers. Using the Krejcie and Morgan Table of 1970, a sample of 384 teachers, and 8 TPD coordinators was adequate for the study. However, to increase the statistical power of the study, the researcher used a sample of 404 respondents. Simple random sampling was used to identify one institution accredited to offer TPD. Each accredited institution enrolled teachers across Kenya. Exponential non-discriminative snowball sampling was used to select teacher respondents. TPD coordinators were selected by purposive sampling. Cluster sampling was used to ensure all the regions were included in the study. Both quantitative and qualitative data were collected using questionnaires and interviews respectively. Data was analyzed using descriptive statistics by way of frequencies, mean and standard deviations as well as inferential statistics including Pearson correlation and simple linear regression. The findings showed a significant positive effect of stakeholder collaboration on implementation of TPD. Effects of stakeholder collaboration explained a significant proportion of variation in implementation of TPD with, ( $t=2.536$ ,  $B = .285$ ,  $p<.0001$ ). The study concluded that an increase in stakeholder collaboration positively influenced implementation of TPD. It recommended establishment of an institution mandated to conduct TPD-related activities in Kenya and work in collaboration with relevant education sector stakeholders in order to effectively implement TPD.

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**INTRODUCTION**

The professional development of teachers is a lifelong, career-wide process. It starts at university and ends with retirement (European Training Foundation, 2013). Effective professional development primarily focuses on enhancing student achievement through enabling changes in practice and improved teaching. It is needed to assist teachers learn and refine their pedagogies to develop student competencies (Darling-Hammond, Hyler & Gardner, 2017). There is wide consensus among researchers and practitioners that teacher quality and the teaching process is the most important factors in the quality of education in schools (European Training Foundation, 2013; Mendenhall, 2017). Effective Teacher Professional Development (TPD) supports and motivates teachers to develop appropriate professional competencies that improve instruction and learners' achievement.

According to Jayaram, Moffit and Scott (2012), TPD can significantly improve teacher effectiveness and student achievement but school systems must think strategically about their programmes (ibid). Beyond the content, important attributes to consider include delivery of the programme i.e. qualifications of trainers, time and duration, organization of the programme in terms of scale and resources, incentives for participation and diagnosis of teachers' professional needs. Consequently, teachers engage in a wide range of professional development activities to improve their practice ranging from formal, lecture-style training to mentoring and coaching (Popova, Arancibia & Breeding, 2019).

Research shows that some TPD forms fail to meet the threshold that produces desired learning effects for both teacher's competency and student achievements. Such programs being costly diminish resources and efforts by reform-minded leaders to deploy effective professional development. Studies in the United States show that only a small minority of American teachers receive the kind of sustained, job-embedded professional development that can change teaching practice and improve student achievement (Darling-Hammond, Wei & Andrea, 2010).

In Cambodia, the New Generation Schools education reforms sought to create a system and culture of high teacher professionalism and high-quality TPD, which is expected to result in teachers utilizing innovative teaching and learning practices and helping students develop twenty-first-century skills (Reimers, 2020). In these schools, administrators and staff have a high degree of autonomy over school operations, resources, curriculum, and instruction.

Studies show that the knowledge and practices of teachers directly influence student outcomes in sub-Saharan Africa and have the greatest potential for intervention through government policy. School leaders and teachers collaborate to achieve high-quality education for learners. Thus ongoing professional development is central to the deployment, assessment and promotion of educators (Taylor, Deacon & Robinson, 2019).

In a study in the Western Cape in South Africa, respondents expressed the constraints they experienced in implementing continuing professional teacher development policy in the

region. Teachers cited demotivation, distrust and frustration with the manner in which CPD policy was implemented and not being treated as professionals. Further all respondents believed that the CPD policy was compliance-driven and its implementation was forced on them. Accordingly, the policy was implemented for political reasons in order to comply with legislation and not necessarily to help teachers to grow and develop as professionals (Johns & Sosibo, 2019).

Kenya is transitioning to competence-based curriculum and assessment in its education reforms. Based on the Kenya Institute of Curriculum Development (KICD) report (2018) just 3% of teachers feel adequately prepared for the new curriculum implementation while 20% were ill-prepared. This demands remedial action as teachers being curriculum implementers need in-service training to improve their preparedness and competencies. Experience shows that the Ministry of Education working with the Teachers Service Commission (TSC) supports in-service training for science-oriented teachers in secondary schools focused on programmes such as Strengthening Mathematics and Science Subjects with no specific programme for teachers of arts-based subjects (Barasa, 2021). Similarly, cascaded in-service training, which characterizes most initiatives, allows only a few selected teachers to attend the training with the hope that they will train their colleagues on return to their schools. There is also a realization that the cascade approach has not produced the intended results (Bett, 2016).

### **Statement of the Problem**

The government of Kenya through TSC has adopted structured TPD as a strategy for improving teacher professionalism and the quality of education in Kenya. The programme is at the critical stage of implementation. One of the focus areas under the TSC strategic plan 2019-2023 is teacher competence, conduct and performance management. Among other objectives, it seeks to improve the quality of teaching in the basic education learning institutions through TPD for

all teachers (Teachers Service Commission, 2019). The rollout of the programme generated mixed reactions among stakeholders with the TSC leadership sticking to its plan while teachers, unions, politicians and the general public having reservations (National Assembly, 2021). This may lead to the resistance of teachers to the implementation of the programme. These concerns raise doubt on the effectiveness of the strategies adopted. Specifically there is a need to understand the effect of stakeholder collaboration on the implementation of the programme. Lack of stakeholder collaboration may undermine the successful implementation of TPD by loss of collective efforts and resources.

### **LITERATURE REVIEW**

#### **Stakeholder Collaboration and TPD Implementation**

In this study, stakeholders refer to people or institutions that are involved in, or affected by, TPD implementation in Kenya. Primary stakeholders include TSC being the programme champion, teachers and TPD service providers. Others include the parliament, civil society and educational professional bodies in the education sector and school administrators.

Stakeholder collaboration increases the likelihood of the resulting policy more effectively meet the needs of various beneficiaries and donors, be judged meaningful and successful by a wide range of stakeholders, limiting unintended consequences, and being more sustainable (USAID, 2006). Participatory approaches also support democratic principles and efforts to move from top-down to partnership models of international development (ibid).

Demirkesen and Reinhardt (2021) examined the effect of stakeholder involvement on the performance of government projects in Poland. The study concluded that stakeholder involvement is positively and significantly associated with performance and recommended involving stakeholders in project implementation. Accordingly, high stakeholder involvement provides an organization with a variety of stakeholder's opinions. Furthermore,

participation of everyone increases the chances of identifying setbacks that may affect project implementation.

Vlcek and Somerton (2023) synthesized literature concerning collaborative engagement between current and emerging stakeholders involved in the education of Australian students with disability. The findings revealed varied benefits of collaborative engagement between the core personnel in the development of children with disability. It recommended ascertaining clear parameters around collaborative engagement and evaluating school processes regarding opportunities for collaboration between teachers and other stakeholders. Moreover, it recommended formal and informal professional development for teachers to understand and professionally engage parents and caregivers in the learning process, and attend to the specific needs of students with disability. However, the study was based on secondary data with a focus on collaboration engagements in the education sector in Australia in respect of inclusive education.

Batool, Malik, and Jumani (2023) explored possible strategies for improved professional development of prospective teachers in Islamabad, Pakistan. The findings reflected that for improved quality of teaching, an operative connection among teacher educators, school principals, cooperative teachers and prospective teachers. However, data was only collected from teacher educators and school principals leaving out opinions of both prospective and practicing teachers. The present study seeks to fill the void by focusing on practicing teachers.

Mati and Atikiya (2022) conducted a study to establish the influence of stakeholder consultation on performance of the Aviation Industry in Kenya. Among other issues, the study revealed that top management seeks views and opinion from other stakeholders during strategic planning and implementation process and that the company encouraged Bottom-up management style where lower management staff articulate issues to the top management. However, the data was only

collected from the management level employees thus the opinions of lower employees were not included in the study. Furthermore, data collection was only done by the questionnaire which was dropped and picked by the researcher. The reliance on the questionnaire alone denied the study additional corroborative data from other sources.

Ngumi and Senelwa (2021) ascertained the impact of stakeholder involvement in implementation of information and communication technology projects in state corporations in Kenya. The respondents highly endorsed the organization's attention to stakeholder identification. However, the incorporation of stakeholder mapping to identify stakeholders still needs a bit of work. Additionally, a review of the descriptive statistics of stakeholder planning reveals the process has been hampered by high levels of bureaucracy and government interference.

Ingabire, Gitahi & Mwangi (2021) carried out a study to examine the role of stakeholders in the University of Rwanda in achieving its goals and objectives as stated in the strategic plan and how the extent of their involvement impacted on the success or failure during the implementation. The findings indicated that 41.3% of the respondents could not clarify their roles in the strategy implementation while 37% could not claim any awareness of the benefits of stakeholders in the strategy implementation in the university. The study did not however fully address the question of how the low extent of involvement of the stakeholders impacted on the strategic plan implementation. Based on the correlation analysis, it concluded that there was a significant linear relationship between involvement of stakeholders and success in the implementation of a strategic plan in Rwanda Higher learning institutions. This implies that the effective involvement of stakeholders improves the success of strategic plan in the higher learning institutions.

The implementation of TPD calls for a partnership, collaboration and networking among the main stakeholders to build long-term relationships. This results in a connection of

mutual benefit and allows people to recognize trends and also emerging obstacles that are present or will in the future affect the projects (Demirkesen and Reinhardt, 2021). In a study by Mugambi and Ochieng (2016) based on theoretical reviews and document analysis to look at how teacher management can be repositioned for effective delivery of services to learners, the authors argue that the directing role of heads of schools involves empowering teachers by involving them in making decisions that require their compliance. In this case TPD being a programme that demands compliance of all teachers thus falls into decisions that require teacher participation prior to its implementation.

Kenya is fortunate to have willing stakeholders who have already implemented initiatives similar to TPD and whose experiences and resources can inform the efficient and effective implementation of TPD. From 1998 until 2013, the Japanese International Cooperation Agency (JICA) supported the Kenyan government in raising the quality of the teaching of Mathematics and Science in primary and secondary schools through cascaded training of teachers at a national, regional and district level using school-based teacher professional development. The teacher development programme was carried out through the Strengthening of Mathematics and Science in Secondary Education Project (SMASSE) and later renamed Strengthening of Mathematics and Science Education (SMASE) following expansion to primary schools. More recently USAID and UK's Department for International Development (DFID) have been supporting school-based teacher development programmes focusing on literacy and numeracy including the Education for Marginalized Children in Kenya (EMACK), Primary Mathematics and Reading (PRIMR) and Tusome programmes (Wamalwa, 2024). Accordingly, between 2006 and 2014, the EMACK programme was implemented in 29 districts in eight counties of Kenya including Nairobi, Coast and North Eastern regions by the Aga Khan Foundation. It focused on enhancing equitable access and improving learning outcomes for children in East Africa primary

grades one, two and three in areas characterized by historical marginalization due to retrogressive cultural practices and poverty such as those living in nomadic communities and informal settlements. It also focused on teacher professional development and training head teachers in school planning and management through a whole-school development approach (ibid).

The activities of the above organizations from the international donor community demonstrate the existence of a host of stakeholders with requisite research on professional development, experience and expertise who may be available and willing to collaborate with TSC in offering meaningful, well-implemented and sustainable TPD programme. TSC being the champion of TPD should have involved them in providing information, guidelines, suggestions, resources and any other form of assistance prior to the initiation of TPD.

The role of teachers' labour unions is widely acknowledged as worthy partners or stakeholders in the implementation of professional learning of teachers. Unions can serve as high-leverage resources to district leaders in their effort to recruit, retain, and develop high-quality staff to support school turnaround. Union leaders and their members can contribute their expertise and experience to ensure that resource allocation decisions to support talent development are aligned with the needs of teachers (Willis et al., 2019). Although sometimes unions may seem to have conflicting interests with employers, collective bargaining may create delays or other challenges, may not always agree with employers on priorities, but essentially they share similar goals of supporting teachers and other staff and improving outcomes for students. There are active teacher unions in Kenya; namely Kenya National Union of Teachers (KNUT), Kenya Union of Post Primary Education Teachers (KUPPET) and Kenya Union of Special Needs Education Teachers (KUSNET) which advance the interests of teachers and to a large extent better quality of education. However, their participation in TPD implementation in Kenya is in doubt going by

their conduct during the duo petitions filed in the National Assembly and the Employment and Labour Relations Court in Nakuru seeking to suspend the implementation of TPD at its inception.

## METHODOLOGY

### Study Design

This was a mixed-method approach study underpinned by pragmatism philosophy. It was guided by dynamic capabilities theory (Teece, Pisano, & Shuen 1997). It adopted the descriptive survey design. It was conducted in Kenya in institutions accredited by TSC to provide TPD services; namely Kenyatta, Mount Kenya and Riara Universities as well as the Kenya Institute of Education Management (KEMI).

### The Target Population

The target population was 327,349 primary and secondary teachers in public schools in Kenya (MOE, 2020) and 188 county-level TPD coordinators from the service providers. It focused on already enrolled teachers as they had credible information on TPD implementation based on their experiences.

### Sampling Techniques

In choosing different types of participants for the study, multiple sampling techniques were used.

Cluster sampling was adopted to ensure that all regions were included in the study. This ensured that teacher respondents in Kenya had an equal chance of being selected for the study. Simple random sampling was used to select one of the four accredited TPD service providers with participants drawn from across the country. Specific respondents were identified using exponential non-discriminative snowball sampling where the first respondent helped to identify subsequent respondents using referrals. Purposive sampling was used to identify 8 TPD coordinators (2 from each institution) at the county level who were included in the study premised on the assumption they had credible information on the implementation of TPD based on their experiences as trainers. A total of 404 respondents including 396 teachers from public primary and secondary schools and 8 TPD county-level coordinators across the country were identified to take part in the study.

### Sample Size

The Krejcie and Morgan Table of 1970, was used to determine a sample size of 384 with slight oversample of 20 to take it to a total of 404 respondents. Since the table already considers their formula to reach the sample size there is no need to reuse it (Bukhari, 2021). The sample size of the study was distributed as shown in Table 1 below.

**Table 1: Distribution of Study Sample among Participants**

Participants	Region	Sample size	Percentage (%)
Teachers	Central	54	13.5
	Coast	45	11.3
	Eastern	35	8.8
	Nairobi	54	13.5
	North Eastern	30	7.5
	Nyanza	50	12.5
	Rift Valley	74	18.5
	Western	54	13.5
TPD Coordinators		8	1
<b>Total</b>		404	100.0%

**Data Collection, Analysis and Presentation**

Data was collected through questionnaires and interview guides. The instruments were used to collect quantitative and qualitative data from teachers and TPD coordinators. The interviews were deemed appropriate and economical because they provided substantial data through probing. Both closed and open-ended questions were used. The questionnaire was put on google sheet and sent to respondents via e-mail and in WhatsApp groups. They were retrieved and printed with the help of research assistants.

Quantitative data was analyzed using descriptive and inferential statistics. Descriptive statistics include percentages, mean and standard deviation as presented in tables. Percentages report response rates. The mean values were based on interpretation of the 5-point Likert scale used by teacher respondents in data collection using the questionnaire. The scale was interpreted using the ranges of 4.2-5=Strongly Agree; 3.4- 4.2=Agree; 2.6-3.4=Undecided; 1.8-2.6=Disagree and 1-1.8=Strongly Disagree (Alkharusi, 2022). The standard deviation of each item was reported to evaluate the level of variation (agreement or disagreement) on each variable by the respondents. The inferential statistics used include Pearson’s product-moment correlation and simple linear regression. Correlations were used to quantify the strength of the linear relationship between indicators of stakeholder collaboration and the dependent variable; TPD implementation;

while regression analysis expressed the relationship in an equation. Simple linear regressions were used to test the hypothesis. Interview data from TPD coordinators was analyzed thematically.

**RESULTS AND DISCUSSIONS**

Out of the 396 questionnaires sent to teachers, 347 were returned which translates to 87.6% response rate. In addition, 5 TPD coordinators were successfully interviewed. Questionnaire response rates are one of the “most controversial issues” in questionnaire-based research. In a systematic review, which included 133 questionnaire-based articles with a total of 149 reported response rates; the mean response rate across the studies was 70.8% (Al Khalaf et al., 2022). Further Nguyen et al. 2022) argue that 65% is an appropriate response rate for research. Based on the discussion by these scholars, the current study’s response rate of 87.6% was considered quite satisfactory.

**Implementation of Teacher Professional Development**

Various statements related to implementation of structured TPD were presented in tables on a five-point likert scale. Based on the responses from teachers a summation of the ratings for mean and standard deviation in respect of each respondent on the variable indicators was obtained to determine a score to measure implementation of TPD as summarized in Table 2 below.

**Table 2 Descriptive Statistics on Implementation of Teacher Professional Development**

Statements on implementation of TPD (N = 347)	Mean	Std. Dev. (SD)	Min	Max
All teachers have enrolled for the TPD programme.	1.801	.695	1	5
Most of the enrolled teachers are satisfied with TPD.	2.290	.897	1	5
Some teachers are unable to enroll for TPD due to financial constraints	3.470	1.256	1	5
Some teachers are unable to proceed with TPD due to ICT challenges	3.885	.955	1	5
I would still enroll for TPD even if it’s made optional	2.712	1.235	1	5
Summated Mean Score	2.832	1.008	1	5

Source: Field Data, 2024.

Table 2 shows that from all the analyzed aspects of implementation of TPD, the teachers disagreed that *all teachers have enrolled for the TPD programme* (Mean=1.290, SD = 0.695) and that

most of the enrolled teachers are satisfied with TPD (mean = 1.801, STD = 0.897). The teachers agreed with the statements that *some teachers were unable to enroll for TPD due to financial constraints* (mean = 3.470, SD= 1.256) and that *some teachers are unable to proceed with TPD due to ICT challenges* (mean = 3.885, SD=0.955). Finally they disagreed with the statement that *I would still enroll for TPD even if it's made optional* (Mean=1.712, SD= 1.235). These results suggest a low extent of implementation of TPD as depicted by the mean index of 2.832 and standard deviation of 1.008 which is less than the benchmark mean of 3.00. Therefore, there was need to determine basic reasons behind low implementation of structured TPD in Kenya and

suggest appropriate strategies to resolve the problem.

### Stakeholder Collaboration and Implementation of TPD

The objective of this study was to determine the effect of stakeholder collaboration on implementation of TPD in Kenya. Teacher respondents were asked to rate on a five-point likert scale based on statements related to stakeholder collaboration. These were analyzed using mean and standard deviation which were summed up to compute a summated mean index as a measure of the level of stakeholder collaboration. The resultant descriptive statistics are summarized in Table 3.

**Table 3: Descriptive Statistics on Stakeholder Collaboration**

Statements on stakeholder Collaboration (N=347)	Mean Statistic	Std. Deviation (SD)	Min	Max
TPD implementation is a shared vision jointly developed by all stakeholders (Teachers, Service providers & TSC).	1.934	.865	1	5
TPD implementation is vision supported by parliament and other educational professional bodies.	3.657	.978	1	5
All teachers' unions participate in decisions related to TPD implementation in Kenya.	2.304	1.203	1	5
Some nongovernmental organizations in the education sector are involved in TPD implementation in Kenya.	1.741	1.425	1	5
TPD implementation structure allows individual teachers and school administrators to share their experiences about the programme.	2.250	.798	1	5
The opinion of teachers is highly valued and considered in TPD implementation in Kenya.	1.648	.985	1	5
<b>Composite values</b>	<b>2.256</b>	<b>1.042</b>	<b>1</b>	<b>5</b>

Table 3 shows that the first variable “*TPD implementation is a shared vision jointly developed by all stakeholders (Teachers, Service providers & TSC)*” had a mean index of 1.934 with responses deviating from this mean by a standard margin of 0.865. Based on the interpretation scale applied in this study the mean of 1.934 could be inferred to imply that the teachers disagreed that TPD implementation is a shared vision jointly developed by all stakeholders (Teachers, Service providers & TSC). The second variable “*TPD implementation is vision supported by parliament and other educational professional bodies*” had a mean

index of 3.657 with responses deviating from this mean by a standard margin of 0.978. The mean index on the scale of interpretation could imply that teachers agreed that TPD implementation is vision supported by parliament and other educational professional bodies. The third variable “*All teachers' unions participate in decisions related to TPD implementation in Kenya*” had a mean index of 2.304 with responses deviating from this mean by a standard margin of 1.203. Based on the scale of interpretation, from the mean index it could be inferred that the teachers disagreed that all teachers' unions

participate in decisions related to TPD implementation in Kenya.

The fourth variable “Some nongovernmental organizations in the education sector are involved in TPD implementation in Kenya” had a mean index of 1.741 with responses deviating from this mean by a standard margin of 1.425. It could be inferred based on the mean that the teachers strongly disagreed that some nongovernmental organizations in the education sector are involved in TPD implementation in Kenya. The fifth variable “TPD implementation structure allows individual teachers and school administrators to share their experiences about the programme.” had a mean index of 2.250 with responses deviating from this mean by a standard margin of 0.798. It could be inferred based on the mean that the teachers disagreed that TPD implementation structure allows individual teachers and school administrators to share their experiences about the programme. The sixth variable “The opinion of teachers is highly valued and considered in TPD implementation in Kenya” had a mean index of

1.648 with responses deviating from this mean by a standard margin of 0.985. It could be inferred based on the mean that the teachers strongly disagreed that the opinion of teachers is highly valued and considered in TPD implementation in Kenya. The results presented in Table 3 shows that all the aspects of stakeholder collaboration combined had a weighted mean of 2.256 with the values deviating from the mean to the extent of 1.042. Based on the scale of interpretation the weighted mean indicated low level of stakeholder collaboration in the implementation of TPD in Kenya.

**Correlation between Stakeholder Collaboration and Implementation of TPD**

The above survey on stakeholder collaboration and implementation of TPD showed variations. To address this, Pearson’s product-moment correlation analysis was used to determine whether there was a relationship between stakeholder collaboration and implementation of TPD. The study findings were as shown on Table 4.

**Table 4: Pearson’s Correlation of Stakeholder Collaboration and TPD Implementation**

	Pearson’s Correlation	1	2	3	4	5	6	7
1 Implementation of TPD	Correlation Sig.	1						
2. TPD implementation in a shared vision jointly developed by all teachers, TPD Service Providers and TSC.	Correlation Sig.	.592** .003	1					
3. TPD implementation is a vision supported by parliament and educational professional bodies.	Correlation Sig.	.524** .029	.468** .018	1				
4. All teachers’ unions participate in decisions related to TPD implementation.	Correlation Sig.	.025 .865	-.124 .896	.037 .795	1			
5. Some nongovernmental organizations in the education sector are involved in TPD implementation.	Correlation Sig.	.612** .000	.568** .043	.713** .000	.458** .038	1		
6. TPD implementation structure allows for individual teachers and school administrators to share their opinion about the programme.	Correlation Sig.	.489** .037	.132 .785	.142 .978	.270 .652	.312 .523	1	
7. The opinion of teachers is highly valued and considered in TPD implementation.	Correlation Sig.	-.217 .256	.012 .985	-.175 .782	.012 .965	.025 .982	.012 .865	1

\*\* . Correlation is significant at the 0.05 level (2-tailed)

Table 4 shows a correlation matrix between stakeholder collaboration and implementation of TPD. It portrays that there exists correlation between the two variables. Four out of six factors of stakeholder collaboration correlated with implementation of TPD. The positive correlations were values which ranged from 0.489 to 0.612 implying implementation of TPD was likely affected by stakeholder collaboration.

The Pearson’s correlation index obtained on the first variable “*TPD implementation in a shared vision jointly developed by all teachers, TPD Service Providers and TSC*” is  $r = 0.592$ , it is positive with  $\rho = 0.003$  which is less than  $\alpha = 0.05$  which means that when there is a shared vision jointly developed by all teachers, TPD Service Providers and TSC, TPD is properly implemented. The second variable “*TPD implementation is a vision supported by parliament and educational professional bodies*” moderately correlated with implementation of TPD ( $r = 0.524$ ,  $\rho = 0.029$ ) at  $\alpha = 0.05$ ). This implies that parliament and other educational professional bodies support TPD implementation. The fourth variable “*Some nongovernmental organizations in the education sector are involved in TPD implementation in Kenya*” ( $r = 0.612$ ,  $\rho < 0.0001$ ) at  $\alpha = 0.05$ ) and the fifth variable “*TPD implementation structure allows for the individual teachers and school administrators to share their opinion about the programme*” moderately correlated with implementation of TPD ( $r = 0.489$ ,  $\rho = 0.037$ ) at  $\alpha = 0.05$ ).

The Pearson’s correlation between the third variable “*All teachers’ unions participate in decisions related to TPD implementation in Kenya.*” and implementation of TPD was not statistically significant ( $r = 0.25$ ,  $\rho = 0.865$ ) at  $\alpha = 0.05$ ). Also the Pearson’s correlation between the sixth variable “*The opinion of teachers is highly valued and considered in TPD implementation in Kenya*” and implementation of TPD was not statistically significant ( $r = -0.217$ ,  $\rho = 0.256$ ) at  $\alpha = 0.05$ ). These two factors were excluded from further data analysis.

**Effect of Stakeholder Collaboration on Implementation of TPD**

Following the established relationship between stakeholder collaboration and implementation of TPD, further analysis was done using the four correlating factors to determine if stakeholder collaboration affected implementation of TPD. A null hypothesis, that, *there is no statistically significant effect of stakeholder collaboration on TPD implementation in Kenya* was formulated and tested to establish the extent to which effects of stakeholder collaboration influenced TPD implementation. A simple linear regression was used to test the hypothesis at 0.05 alpha levels. Before this analysis, the researcher checked the assumptions of normality of data and found that they were not violated. Tables 5, 6, and 7 show the information from the regression analysis.

**Table 5: The Regression Model Summary for Effects of Stakeholder Collaboration on Implementation of TPD**

Model Summary					
Model	R	R- Square	Adjusted R-Square	Std. Error of the Estimate	p-value
1	.562 <sup>a</sup>	.359	.321	.86425	.000

a. Predictors: (Constant), stakeholder collaboration

b. Dependent Variable: implementation of TPD

Table 5 shows the value in R, ( $r = .562$ ), indicating there was a medium positive relationship between the two variables- implementation of TPD and effects of stakeholder collaboration. The coefficient of determination indicated R-Square,

( $R^2 = .321$ ), reveals the amount of variability in TPD implementation that can be explained by effects of stakeholder collaboration. The adjusted R-squared value is used to adjudge goodness multivariate regression model. For the fact that

this model was built on a single variable, the study used R<sup>2</sup> value in determining the proportion of TPD implementation that can be accounted for by effects of stakeholder collaboration. The value of adjusted R square reveals that 32.1% variability in implementation of TPD could be explained by effects of stakeholder collaboration. This

indicates that 67.9 % unexplained variation could be attributed to other factors not included in this model- The R- Squared (R<sup>2</sup>). Analysis of Variance was used to test the significance of the relationship between effects of stakeholder collaboration and TPD implementation with results as presented in Table 6.

**Table 6: ANOVA Test for Effects of Stakeholder Collaboration on TPD Implementation**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12.365	1	63.856	84.254	.000 <sup>a</sup>
	Residual	102.321	345	4.698		
	Total	114.686	346			

a. Predictors: (Constant), stakeholder collaboration

b. Dependent Variable: implementation of TPD

Table 6 discloses whether or not the model significantly predicts implementation of TPD. The analysis in Table 6 shows ANOVA results of  $F=84.254$  with 1 and 345 degrees of freedom and  $F$  being significant at  $p<.05$ . Given this result, it can be presumed that the regression model significantly predicts the extent to which effects

of stakeholder collaboration affect implementation of TPD. The regression equation establish from this output may be stated as  $F(1,345) = 84.254, p < .0001$ . Furthermore, Regression Coefficient in Table 6 reveals how (effects of stakeholder collaboration) the predictor variable contribute to the model.

**Table 7: Regression Coefficient for Stakeholder Collaboration Effects on TPD Implementation**

Model		Coefficients			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	Constant	1.256	.965		24.235	.000
	Stakeholder collaboration	.285	.154	.432	2.536	.000

a. Predictors: (Constant), stakeholder collaboration

b. Dependent Variable: implementation of TPD

Table 7 shows the results of the regression coefficient. It is the equation that provides information about the change in the value of the dependent variable (implementation of TPD) corresponding to one unit change in the independent variable (stakeholder collaboration). The data in Table 7 indicates model;  $Y$  (implementation of TPD) =  $1.256 + 0.285 X_1 + \epsilon$  ( $X_1$ = stakeholder collaboration), where  $Y$  is the estimated value of the dependent variable, and  $X$  is the value of the independent variable. From the foregoing, results of the regression coefficient reveal that an increase by 1 unit in effects of stakeholder collaboration leads to an increase in the implementation of TPD by 0.285 units.

The findings in Table 7 of the regression shows that effects of stakeholder collaboration explained significant proportion of variation in implementation of TPD, ( $t=2.536, B =.285, p<.0001$ ). Based on this evidence in Table 7, the study rejected the null hypothesis,  $H_03$  that; “*there is no statistically significant effect of stakeholder collaboration on TPD implementation in Kenya.*” This implies that stakeholder collaboration has significant effect on the implementation of TPD. Therefore, the study concludes that the low degree of stakeholder collaboration significantly explains the below average implementation of TPD in Kenya. Stakeholder collaboration is more likely to positively influence the implementation of TPD.

The findings in Table 7 are in agreement with the study by Ingabire, Gitahi & Mwangi (2021) which examined the role of stakeholders in University of Rwanda in achieving its goals and objectives as stated in the strategic plan and how the extent of their involvement impacted on the success or failure during the implementation. It concluded that there was a significant linear relationship between the involvement of stakeholders and success in the implementation of strategic plan in Rwanda Higher learning institutions. Although the study by Ingabire et al. (2021) supported the current study, it failed to fully address the question of how the low extent of involvement of the stakeholders impacted on the strategic plan implementation. It was also limited to the implementation of strategic plans in Rwandese Higher Institutions of learning.

Further, the findings presented in Table 7 support those of Demirkesen and Reinhardt (2021) who examined the effect of stakeholder involvement on the performance of government projects in Poland and that stakeholder involvement was positively and significantly associated with the performance of the projects. This implied that as stakeholder involvement increased, the level of performance was also expected to increase. Although the study of Demirkesen and Reinhardt (2021) supported the current study, despite its wide scope which considered 13 government projects and respondents from senior manager and support staff, it was limited to unspecified government projects in Poland.

Increasing stakeholder collaboration results in high chances of successful implementation of TPD. According to USAID (2006) Stakeholder collaboration in the implementation of education quality improvement projects increases the likelihood that the resulting policy will more effectively meet the needs of various beneficiaries and donors, be judged meaningful and successful by a wide range of stakeholders, have fewer unintended consequences, and be more sustainable. High stakeholder involvement provides an organization with a variety of stakeholder's opinions. Furthermore, participation of everyone increases chances of

identifying setbacks that may affect project implementation (Demirkesen and Reinhardt, 2021).

Further the findings in Table 7 echoes the interview data. Respondents in the interview were concerned with TSC's failure to collaborate with other stakeholders. Respondent A stated;

*“TPD is important for all players in the education sector keen on improving the quality of education. Working with Teachers Unions can reduce their resistance to the programme. TPD is not entirely new based on already ongoing initiatives by other agencies like CEMASTE, KICD, SMASSE and USAID. They have experiences and resources that can help. TSC Leaders should not ignore their voice and contribution”*

The findings in Table 7 further support the theory of dynamic capabilities (Teece et al., 1997) which guides this study. It is concerned with the development of strategies for senior managers to adapt to radical change, while maintaining minimum capability standards for competitive survival. Two of the three important dynamic capabilities according to the theory is the ability by employees to quickly learn and build new strategic assets for the company and integrate them with customer feedback. This contemplates sharing of information among the senior managers, employees and customers who are key stakeholders in the company. This customer feedback can only be found if customers, employees and senior managers have a collaborative engagement. In the case of implementation of TPD, through stakeholder collaboration all involved or affected parties (teachers included) quickly understand TPD's purpose, their shared responsibility and accountability for its success or failure.

In conclusion, the findings reflected the study by Batool, Malik and Jumani (2023) that for improved quality of teaching, there was need to ensure an operative connection among teacher educators, school principals, cooperative teachers and prospective teachers. Equally important are universities. In Colombia, opportunities for TPD

are offered in partnership with local universities that have a presence in regions of operation (Boateng & Wolfenden, 2022). This operative connection is what implementation of TPD requires among TSC leadership, teachers, teachers' unions, teacher training institutions, faculties of education in universities, the ministry of education and its related semi-autonomous agencies, school administrators, teacher unions, educational professional associations, nongovernmental organization in the education sector and parliament.

## CONCLUSIONS

Based on the findings, the study concluded that an increase in stakeholder collaboration leads to increased success in the implementation of TPD characterized by higher enrollment, satisfaction and sustainability.

## RECOMMENDATIONS

- TSC leadership should initiate process and create conducive climate that promotes collaboration among all stakeholders to understand their responsibility and circumstances under which they are to be held accountable.
- TSC leaders should be ready to listen to other stakeholders suggestions on how best to implement its programmes. For instance, teachers being employees of TSC and customers of TPD, their contribution and feedback are crucial for successful implementation of TPD.
- The government should establish an institution mandated with Teacher Professional Development working in collaboration with all relevant stakeholders.

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## Conflict of Interest

The author(s) declares no conflict of interest.

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