



**UNPACKING THE LINK BETWEEN TEACHER PROFESSIONAL DEVELOPMENT STRATEGIES AND EDUCATION  
QUALITY IN MURANG'A COUNTY**

**Irene Waithira Irungu & Dr. Reuben Gitonga Mutegi, PhD**

**UNPACKING THE LINK BETWEEN TEACHER PROFESSIONAL DEVELOPMENT STRATEGIES AND EDUCATION  
QUALITY IN MURANG'A COUNTY**

<sup>1</sup>Irene Waithira Irungu & <sup>2</sup> Dr. Reuben Gitonga Mutege, PhD

<sup>1</sup> University of Nairobi, Kenya

<sup>2</sup> University of Nairobi, Kenya

**Accepted: February 15, 2025**

**DOI: <http://dx.doi.org/10.61426/sjbcm.v12i1.3180>**

**ABSTRACT**

*The purpose of this paper was to examine how professional development opportunities for teachers affected student achievement in Kenyan public secondary schools. The objective of the paper was to establish the link between professional development strategies and students' academic performance. The paper was anchored on Bertalanffy's 1972 General System Theory (GST). It used a descriptive survey design and collected data from Murang'a County. The study population comprised of 632 participants, consisting of 593 educators and 39 school administrators. The total sample size was 245, consisting of 15 principals and 230 teachers. A proportional stratified sampling method and simple random sampling were used. Quantitative survey data was used in the research, which was processed using SPSS version 25, the statistical tool for the social sciences. Furthermore, chi-square tests revealed that public secondary schools in Kigumo sub-county, Murang'a county, Kenya, benefited from teacher professional development in terms of education quality ( $\chi^2(2, N= 144), P=.05$ ). The paper suggested that the Teachers Service Commission (TSC) recruit additional teachers to combat teacher shortages and excessive turnover. Additionally, the study recommended that the government should provide more funds to secondary schools to assist teachers with in-service training for career progression and improve overall education quality in Kenya.*

**Keywords:** Public Secondary School, Strategic Plan, Quality Of Education, Teacher Professional Development

**CITATION:** Irungu, I. W., & Mutege, R. G. (2025). Unpacking the link between teacher professional development strategies and education quality in Murang'a County. *The Strategic Journal of Business & Change Management*, 12 (1), 198 – 208. <http://dx.doi.org/10.61426/sjbcm.v12i1.3180>

## INTRODUCTION

The present educational landscape is characterized by a dynamic and complex system, marked by high enrollment, insufficient resources, intense competition, and an increased demand for accountability. In this knowledge-based economy, technology and innovation are central, and the quality of education offered by educational institutions is of utmost importance. As such, institutions must develop strategic plans to address potential risks and ensure that learners receive quality education. This is necessary to meet the needs of the dynamic nature of the educational system as noted by Ngetich (2019).

As suggested by Bryson (2018) and Schlebusch and Mokhatle (2016), strategic planning plays a critical role in enabling institutions to assess future challenges and address them effectively in a dynamic educational environment. Mwangi (2017), underscores the significance of considering various aspects to ensure the delivery of high-quality education. These factors encompass the relevance of course material, the alignment of educational institutions with current needs, the quality of infrastructure, the achievement of learning outcomes, and the accessibility of resources. By implementing a strategic planning approach, academic institutions can effectively assess these factors and design educational programs that adhere to the highest standards of quality and distinction. As stated by the World Bank in 2019, a staggering number of 37 million children in Africa are receiving an inadequate education, which leaves them with skills equivalent to those who do not attend school. This emphasizes how critical it is to reshape the educational system to meet the goals of Vision 2030. In 2003, the Kenyan government issued a circular mandating all secondary schools to develop strategic plans through the Ministry of Education. A subsequent strategic plan spanning the years 2008–2012 was issued by the Ministry of Education with the aim of raising the standard of education in the nation.

The objective of the investigation was to unpack the link between teachers' professional development strategies and the quality of education in secondary schools in Murang'a County. Therefore, the paper evaluates teachers' strategies to enhance instructional practices and student learning outcomes. The findings provided valuable insights into teacher career development's effectiveness in improving education quality. By offering solutions supported by evidence, the study contributed to the standard of education in Murang'a County's public secondary schools.

## LITERATURE REVIEW

Professional development is an ongoing process in which individuals enhance their work identity and professional objectives via education, training, and work experiences, as stated by UNESCO (2015). Ensuring the presence of highly skilled professionals in schools and the education system is of utmost importance, with teachers being a vital asset. UNESCO (2014) said that teachers globally have insufficient skills and need ongoing professional development. Victoria's Strategic Plan (2019-2023) aims to enhance teaching and learning effectiveness in over 800 government schools by fostering Victorian learning communities and promoting the widespread implementation of professional development.

Stoimenova and Trpceska (2015) and Raman and Thannimalai (2018) investigated the execution of teacher training courses for professional growth in Macedonia. Their focus was on the need to ensure that students' learning time is not disrupted. They also emphasized the importance of principals' professional development in information and communication technology (ICT) to prepare students to take the lead in technology and encourage educators to use ICT in the classroom.

The World Bank (2019) presented concerning data on the quantity of educators who have undergone training in secondary education. In Nigeria, the proportion of teachers who have had formal training is a mere 15%, whilst in Namibia,

the percentage of teachers who have undergone training is at a modest 20%. In order to raise the bar for education in sub-Saharan Africa, Sayed (2018) argues that teachers in the region must participate in ongoing professional development opportunities.

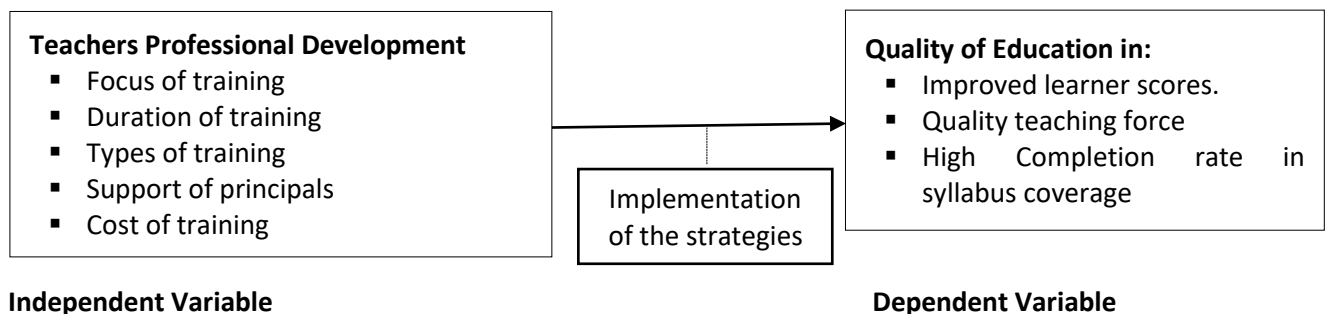
Kenya's key institutions, including Kenya Institute of Curriculum Development (KICD), Kenya Institute of Education Management (KEMI), Centre for Mathematics and Science Technology Education in Africa (CEMASTEA), Strengthening Mathematics and Sciences in Secondary Education (SMASSE), and Kenya Institute of Special Education (KISE), are significantly involved in shaping the education. The primary responsibility of KICD is to provide training to teachers on curriculum and enhance teaching practices. KEMI provides training programs for educators and school principals, whereas CEMASTEAs assists teachers in enhancing their pedagogical abilities via continuous professional development that incorporates the latest technical breakthroughs and developing educational trends. The primary objective of the SMASSE program is to augment the teaching abilities of educators, while KISE focuses on providing specialized training to teachers and staff members in order to facilitate inclusive education for students with special needs (Ministry of Education, 2018).

The Teachers Service Commission in Kenya provides in-service training for primary and

secondary school teachers to support their professional growth, as outlined in Sessional Paper No. 1 of 2005 and the established policy framework on teacher professional development. However, according to the Education Sector Report (2018), there are issues related to inadequate institutionalized support (MOE, 2019). Therefore, assessments such as EGMA, NASMLA, and SACMEQ indicate the need for additional content for teachers. Professional development is essential for career advancement in the teaching profession. In public secondary schools in Nyandarua County, scholars Watene, Choge, and Kodak (2020) revealed that professional development opportunities for teachers had a direct impact on student achievement. In addition, Raman and Thannimalai (2018) stress the significance of principal and teacher professional development, especially in the area of information and communication technology.

The paper was grounded in Bertalanffy's General System Theory (GST) of 1972, which conceptualizes organizations as organisms comprising multiple interconnected parts working collaboratively toward a unified objective. The theory suggests that systems consist of components working in open interactions with their environments. The theory suggests that schools are intricate, dynamic systems comprising interconnected components that strive to achieve specific educational quality goals.

### Conceptual Framework



#### Independent Variable

#### Dependent Variable

Figure 1: Conceptual Framework

### A conceptual framework of study variables

This paper presents a conceptual framework that is built upon the General System Theory (GST)

and the relevant literature review. Teacher professional development was considered a vital aspect in enhancing motivation and quality

teaching among teachers, by keeping them up-to-date with the latest teaching pedagogy and methodology trends. The framework was conceptualized enhance the quality of education and promote a skilled workforce. Additionally, the study identifies strategy implementation as an intervening variable in facilitating or hampering the quality of education. To measure the study variables, a 5-point Likert scale was utilized.

### MATERIALS AND METHODS

The paper utilized descriptive survey research, primarily using quantitative data, as described by Wangila (2015). The study's target population was 632, consisting of 39 principals and 593 teachers. The sample size was 245, consisting of 15 principals and 230 teachers, calculated using Yamane's formula with a margin of error of 5%, a confidence level of 95%, and a significance level of  $P = 0.5$  (Yamane, 1967).

The paper utilized structured questionnaires to gather data from teachers and principals for a

comprehensive analysis. The paper collected quantitative data, which were analyzed using descriptive and inferential techniques. SPSS version 25 was used to analyze data by verifying questionnaires, tabulating, and coding responses.

### RESULT AND DISCUSSION

The paper collected a total of 13 principal questionnaires and 146 teacher questionnaires, resulting in response rates of 87% and 66%, respectively. The response rates indicate that there is sufficient data for analysis. The paper assessed the suitability of respondents based on their demographic information, including gender, professional qualification, and work experience, which was crucial for assessing their personal information. Additionally, the paper used gender analysis of responses to identify the gender dominance of public secondary school administrators and instructors. The obtained outcomes are depicted in Table 1.

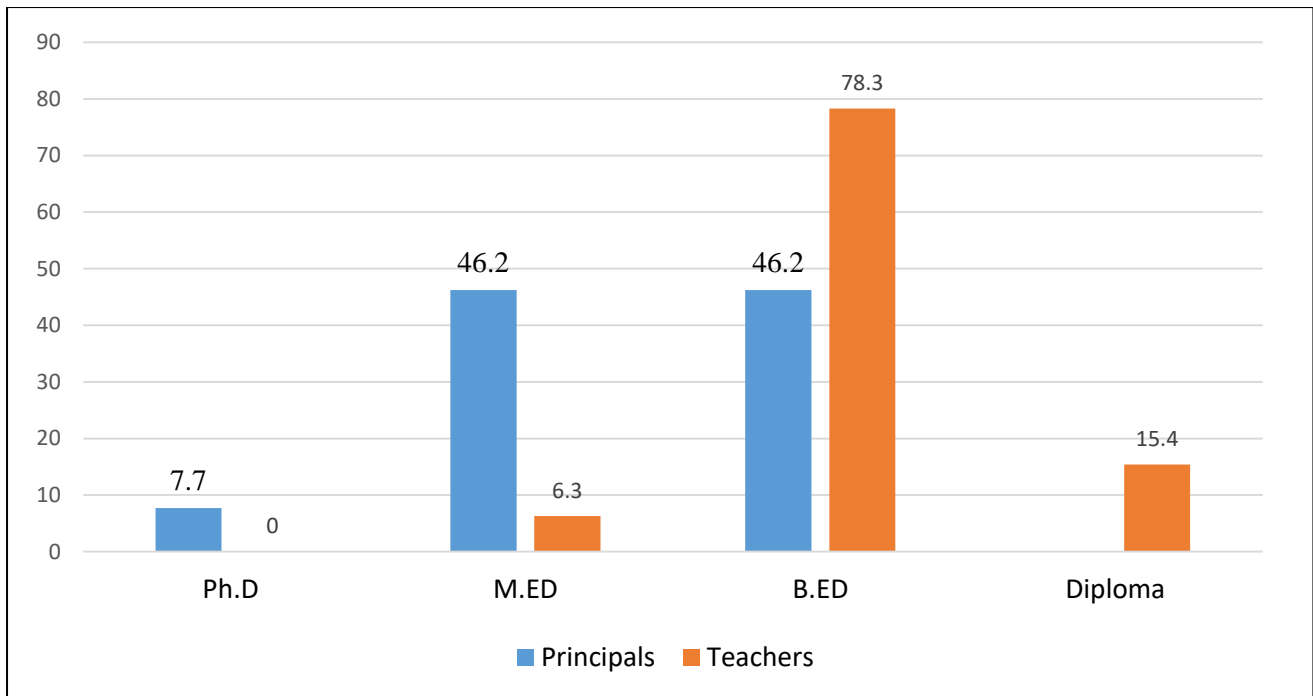
**Table 1. Gender distribution**

Gender	Principals		Teachers	
	f	%	F	%
Female	1	7.7	68	46.6
Male	12	92.3	78	53.4
<b>Total</b>	<b>13</b>	<b>100</b>	<b>146</b>	<b>100</b>

The results in Table 1 revealed that male teachers were the majority, representing 78 (53%) and 12 (92%) principals. While, female teachers, 68 (47%) and (1) 7.7% principals, were in the minority in Kigumo sub-county. In contrast, female principals were a minority, making up just 7.7%. The results indicate an inequity in the distribution of genders in professional development and consequently, career progression.

### Professional Qualifications of Principals and Teachers

The paper examined the highest professional credentials of principals and teachers, assessing their degree of education and their role in imparting information and contents to students. The examination of the replies from the principals and teachers is shown in Figure 1.



**Figure 1. Teachers' Academic Qualification**

The findings in Figure 1, revealed that 46% of principals in Kigumo Sub County hold a Masters of Education and Bachelor of Education, while 8% possess a PhD. The majority of principals expressed satisfaction with their degrees, although those with higher degrees tend to pursue positions at the university or college level, such as lecturers and tutors. Additionally, the results show that among the selected public schools, 6% of teachers' possess a Master of Education, 78% hold a Bachelor of Education, and 15.4% have a diploma. These figures suggest that both teachers and principals possess the pedagogical techniques and requisite abilities necessary to provide quality education in Kigumo Sub County.

#### **Leadership Position for Teachers**

The study surveyed teachers on their leadership responsibilities inside educational institutions, while establishing a correlation between extracurricular activities together with educational excellence. A high-quality schooling environment is not just assessed based on academic performance, but also takes into account extracurricular activities such as debates, athletics, and acting. Teachers in leadership roles serve as exemplary figures, positively impacting their students' academic achievement and the overall quality of education, as shown in Table 2.



**Table 2: Teachers' Responsibilities**

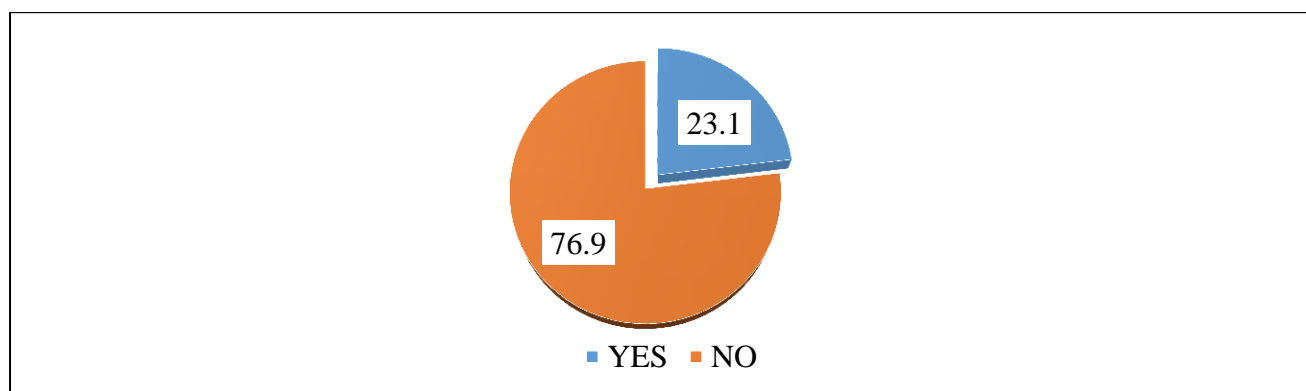
Positions	Frequency	Percent
Deputy principal	1	.8
Subject teacher	20	15.0
Netball coach	2	1.5
Head of department	19	14.3
Senior teacher	3	2.3
C.U Patron	6	4.5
Acting Deputy Principal	1	.8
Chaplain	1	.8
Scout Master	2	1.5
Acting Games Master	3	2.3
Drama	6	4.5
Guidance and counselling (G&C)	8	6.0
Class teacher	4	3.0
Coaching	12	9.0
Exam coordinator	2	1.5
School choir	1	.8
Dorm mistress	1	.8
Dean of studies	1	.8
Patron	40	30.1
<b>Total</b>	<b>133</b>	<b>100.0</b>

The data presented in Table 2, a considerable proportion of teachers, 30.1%, were identified as club patrons. Among these, 15.0% of teachers held no other positions other than subject teachers, while 14.3% were found to be heading various departments. The aforementioned findings suggest that teachers are actively engaged in co-curricular activities, beyond their primary teaching responsibilities, thereby providing effective guidance to the students.

**Teachers Professional Development and Workshops & Seminars**

Paper surveyed professional development issues, specifically regarding teachers attending workshops and seminars. The analyzed data was presented in subsequent sessions.

Principals were surveyed on the school's strategies for teacher professional development training duration, and their responses were analyzed, with results presented in Figure 2.



**Figure 2: School' Strategies for Teacher Professional Development Training**

Source: Irungu (2022: p.69)

In Figure 2, approximately 77% of principals expressed their disagreement with the school's tactics for teacher professional development, highlighting a widespread absence of consistent approaches to training teachers, which is vital for maintaining high-quality education. Conversely, 23% of principals agreed with the length or emphasis of the training provided.

### Teachers Professional Development Support by Principals

The majority of principals agreed that teacher professional development has a significant positive impact on public secondary school pupils. In fact, 96% of teachers surveyed in the study agreed that professional development is a crucial tool for

enhancing educational outcomes. The research highlights the importance of regular teacher training in keeping up with the dynamic nature of society. To ensure that teachers are well-equipped to handle students and maintain high-quality education, it is essential to update them on the latest pedagogical trends.

### Teacher Professional Development and Its Influence on Quality of Education

In order to help stakeholders, make informed decisions on teacher training, the study investigated how the teachers felt about how professional development affected student achievement. Table 3 presented the valid statistics.

**Table 3. How Teacher professional development affect quality of education**

	Frequency	Valid percent
Greatly	3	23.1
Very greatly	9	69.2
Moderately	1	7.7
<b>Total</b>	<b>13</b>	<b>100</b>

Source: Irungu (2022: p.70)

Results in Table 3, demonstrated that 69.2% of teachers have a strong belief that teacher training had a considerable influence on the quality of education. Additionally, 23.1% strongly agree with this belief, while 7.7% perceive the impact to be moderate. The discovery indicated that the instruction of teachers had a substantial influence on the caliber of education. These programs facilitate the acquisition of skills by trainees to engage parents and stakeholders, establish a

positive relationship with students, implement efficient teaching techniques, and inspire their learners, thereby enhancing the overall standard of education.

### Roles of Principals in Teachers Continuous Professional Development

The survey collected responses from principals about their role in fostering the ongoing growth of school teachers. The results are displayed in Table 4.

**Table 4. Roles of Principals in Continuous Professional Development**

Roles	Responses	
	N	%
TSC guidelines	2	16.7
Permit teachers to attend workshops	3	25.0
Implement TSC policy	2	16.7
None	5	41.7
<b>Total</b>	<b>12</b>	<b>100</b>

Source: Irungu (2022: p.71)

The data presented in Table 4, demonstrated that a large percentage of public school

administrators did not prioritize ongoing professional development for teachers, with 41.7%



failing to do so. Furthermore, only 16.7% of principals implemented policies from the Teacher Service Commission (TSC), while 25.0% allowed teachers to participate in workshops. These findings suggest that most principals did not empower teachers for ongoing professional development. The study suggests that while principals are not accountable for initiating teachers' professional development, they are responsible for executing TSC standards and regulations. As essential professionals at the institutional level, principals possess a deep understanding of the institution's

requirements. Therefore, they should take the lead in establishing training opportunities, such as workshops, even in a select number of schools, to enhance the quality of education.

### Interventions for Improvement of Teachers Professional Development

The paper sought information on the best strategies to improve the professional development of teachers by gathering their opinions. The findings provide significant perspectives for determining strategies to enhance teacher education, as shown in Table 5.

**Table 5: Interventions for Teachers Improvement**

Interventions	Responses	
	N	Percent
TSC grant study leaves and pay for training	4	3.1%
Offer free training by TSC	26	20.5%
Balanced training of teachers	4	3.1%
All teachers to be trained frequently	16	12.6%
Promote teachers	27	21.3%
TSC not to force teachers	14	11.0%
Teachers initiated trainings	8	6.3%
TSC increases salary for trained teachers.	4	3.1%
Involve teachers during planning	12	9.4%
Reduce training fee	8	6.3%
TSC to cost share training fee with teachers	2	1.6%
The university teacher training is reviewed to adapt to the latest trends	2	1.6%
<b>Total</b>	<b>127</b>	<b>100.0%</b>

Source: Irungu (2022: p.73)

The data in Table 5 show several significant interventions. These include TSC offering free training at a rate of 21%, promoting teachers to follow ranks at 21.3%, and conducting frequent training for all teachers at 13%. Other interventions scored below 11%, such as TSC not forcing teachers or reducing training fees. Additionally, the level of teacher involvement in the planning process and the reduction in training costs.

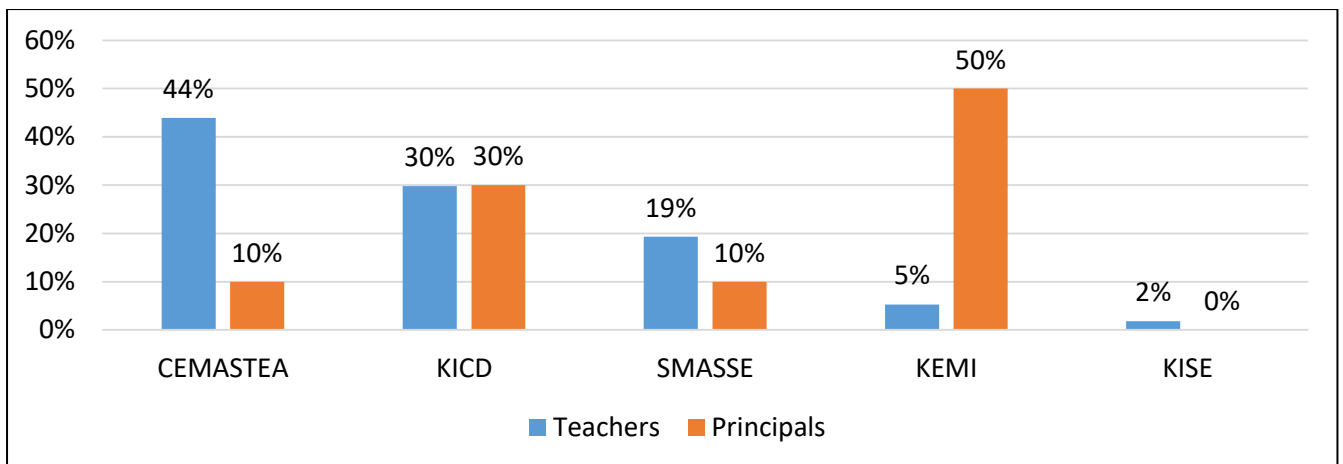
### Teachers In-service Training

This study found that 70% of teachers disputed the notion that both current leaders and teachers receive continual professional development

training. The findings are consistent with the conclusions reached by Raman and Thannimalai (2018), which suggest that principals should obtain specialized training in ICT to become leaders in technology and inspire teachers to integrate ICT into their teaching practices. Doing so can enhance the quality of education provided to students.

### Category of Training for Principals and Teachers

The principals and teachers who received training were obligated to specify the kind of training they received. The participants completed questionnaires, and the data obtained was evaluated and shown in Figure 3.



**Figure 3: Category of Training Achieved**

Source: Irungu (2022: p.74)

In Figure 3, according to a survey, 44% of teachers and 10% of principals have received benefits from CEMASTEIA, which is a policy that provides in-service training for teachers specializing in mathematics, science, and technology. On the other hand, KICD has provided benefits to 30% of teachers and principals. SMASSE has helped 19% of teachers and 10% of principals, whereas KEMI has benefited 50% of principals and 5% of teachers. In contrast, KISE has only benefited 2% of teachers, and none of the principals have benefited from the

training. Most principals have received training from KEMI, indicating that many teachers have not received ongoing professional development, leading to a decline in educational quality.

Further, a cross-tabulation analysis was performed on responses from teachers in Kigumo Sub County about the impact of professional development on raising standards of instruction in public schools. Tabulated in Table 6 are the study's outcomes.

**Table 6: Cross-Tabulation Statistics**

Crosstabs		Influence of professional development on quality of education		Total
		No	Yes	
Female	Count	1	66	67
	% within gender	1.5%	98.5%	100%
Male	Count	5	72	77
	% within gender	6.5%	93.5%	100%
Total	Count	6	138	144
	% within gender	4.2%	95.8%	100%

Source: Irungu (2022: p.75)

The data shown in Table 6 demonstrates that both male and female teachers share the idea that professional development significantly influences the quality of teaching, with a 95.8% agreement rate. In contrast, a mere 4% of teachers have a dissenting view on this concept.

### Relationship Between Teacher Professional Development and Quality of Education

The study used chi-square analysis to evaluate how teacher professional development correlated with education quality, as displayed in Table 7.

**Table7: Chi-Square Tests on Educational Quality and Teachers' Professional Development**

	Value	Df	Asymp. Sig. (2-sided)
Likelihood Ratio	8.477	1	.002
Continuity Correction	14.166	2	.008
Pearson Chi-Square	12.244	2	.034
N of Valid Cases	144		

Source: Irungu (2022: p.76)

A positive relationship between teacher professional development and the quality of instruction in public secondary schools was demonstrated by  $X^2$  (2, N=144),  $P=.05$ . The findings reveal that student achievement suffered because administrators and teachers were not attending professional development and service workshops in Kigumo Sub County. Most public schools have provided poor education over the last five years, as shown by their below-average K.C.S.E. scores.

Further continuous professional development for educators was also crucial to student achievement. This study supports the findings of Watene, Choge, and Kodak (2020), which demonstrate that improved student outcomes are associated with increased investment in teachers' professional development. Additionally, it also supports the suggestion by Raman and Thannimalai (2018) that principals should focus on professional development, specifically in information and communication technology (I.C.T.), to improve the standard of education and become technology leaders.

## CONCLUSION

The study established that professional development has a significant impact on education quality in public schools in Kigumo Sub County. The enhancement of education is crucial for both male and female educators. Furthermore, research has shown that public secondary schools in Kigumo Sub-County experienced an improvement in educational standards due to teacher professional development. The statistical analysis and key observations had a significant influence on teacher

professional development, resulting in an improvement in public secondary school education.

However, the study revealed that insufficient professional training and service workshops for principals and teachers had a detrimental effect on student's academic performance and the quality of secondary school education in Kenya. Therefore, the paper recommends that TSC enhance teachers' involvement in training initiatives and provide incentives for their continued professional growth, such as complimentary training, cost subsidies, and promotion of module completion.

In addition, questionnaires were used for data collection due to their efficiency in covering a large population in a short time, while also being cost-effective. Triangulation is a statistical technique utilized to bolster the credibility and dependability of research outcomes.

## Declaration of conflict of interest

The author is devoid of any conflicts of interest.

## Acknowledgements

The author is associated with the corresponding author, and I sincerely appreciate his hard work. I appreciate your time, effort, and expertise that led to the publication. Your contributions have greatly enhanced the scholarly value of this work.

**Corresponding Author:** Dr. Reuben Gitonga Mutegi is a senior lecturer in the Department of Educational Management, Policy, and Curriculum Studies in school of education at the University of Nairobi.

## REFERENCES

- Bertalanffy, L. V. (1972). The History and Status of General System Theory. 15, 407-426. *Academy of Management Journal*, 15, 407-426.
- Bryson, J. M. (2018). *Strategic planning for public and nonprofit organizations: A guide to strengthening and sustaining organizational achievement*.
- Irungu, I. (2022). *Influence of strategic planning on quality of education in public secondary schools in Kigumo sub-county, Murang'a, Kenya* (Doctoral dissertation, University of Nairobi).
- Ministry of Education. (2018). *National education sector strategic plan for the period 2018 - 2022*.
- Mwangi, J. K. (2017). *Effectiveness of Strategic Planning process in the management of secondary schools in Nakuru County, Kenya*. Nairobi: Kenyatta University.
- Ngetich, S. W. (2019). *Factors influencing the implementation of strategic plans in public secondary schools in Rongai Sub-County, Kenya*. Nakuru: Kabarak University.
- Okong'o, R. B., Ngao, G., Rop, N. K., & Nyongesa, W. J. (2015). *Effect of Availability of Teaching and Learning Resources on the Implementation of Inclusive Education in Pre-School*. Nairobi: University of Nairobi.
- Ong'uti, C. O., Aloka, P. J., & Nyakinda, J. O. (2019 ). Relationship between Goal-Setting and Mathematics Achievement among Students in Public Secondary Schools in Kenya,. *International Journal of Advanced and Multidisciplinary Social Science*, 5(No. 1), pp. 7-14. doi:10.5923/j.jamss.20190501.02
- Pritchett, L., & Beatty, A. (2015). Slow down, you're going too fast: Matching curricula to student skill levels. *International Journal for Educational Development* 40, 276-288.
- Priyambodo, P., & Hasanah, E. (2021, April). Strategic Planning in Increasing Quality of Education. *Nidhomul Haq, Jurnal Manajemen Pendidikan Islam*, 6(1), 109-126. doi:10.31538/ndh.v6i1.1138
- Raman, A., & Thannimalai, R. (2018). The Influence of Principals' Technology Leadership and Professional Development on Teachers' Technology Integration in Secondary Schools. *Malysian Journal of Learning and Instruction*, 15(No.1), 203-228.
- Sayed, Y. (2018). *Continuing Professional Teacher Development in Sub-Saharan Africa: Improving Teaching and Learning*. Bloomsbury Publishing.
- Schlebusch, G., & Mokhatle, M. (2016). Strategic planning as a management tool for school principals in rural schools in the Motheo District. *International Journal of Education science*, 13(3), 342 - 348.
- UNESCO. (2014). *Teaching and Learning : Achieving quality for all*. Paris: UNESCO.
- UNESCO. (2015). *Education for All Global Monitoring Report: Policy Paper 19*. UNESCO.
- Wangila, E. W. (2015). *Effects of Computer Based Instruction on Student's Attitude, Perception and Achievement in Rural Secondary in Kenya*. Published M.Ed Thesis. Kakamega: Masinde Muliro University.
- Watene , D., Choge, R. J., & Kodak, B. (2020). Influence of Teachers' Professional Development on Performance in Kenya Certificate of Secondary Education in Public Secondary Schools in Nyandarua County, Kenya. *The International Journal of Humanities and Social Sciences*, 8(5). doi:10.24940/theijhss/2020/v8/i5/HS2005-101
- World Bank. (2019). *World Development Indicators (database)* . World Bank.
- Yamane, T. (1967). *Statistics, and Introductory Analysis*. New York: Harper and Row.