



Extent of Teachers' Participation in Professional Development Activities for Instructional Delivery in Junior Schools in Turkana East Sub-County, Turkana County, Kenya

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ABSTRACT

This study examined the extent of teachers' participation in professional development (PD) activities for instructional delivery in public Junior Schools (JS) in Turkana East Sub-County, Turkana County, Kenya. The study was guided by the objective of establishing the frequency, nature, and continuity of teachers' PD participation within a Competency Based Education (CBE) context that increasingly demands learner-centred pedagogy, technology integration, and continuous professional growth. Anchored on Guskey's Theory of Teacher Change, the study adopted a convergent parallel mixed-methods design combining quantitative and qualitative strategies. The target population comprised 140 public JS teachers, 32 Heads of Institutions (HOIs) and 2 Curriculum Support Officers (CSOs), from which a target sample of 138 respondents (104 teachers, 32 HOIs, 2 CSOs) was drawn using simple random and census sampling techniques. Data were collected using a questionnaire, an interview schedule, an observation checklist, and a document analysis guide. Data were analysed descriptively (SPSS version 30) for the quantitative strand and thematically for the qualitative strand. Findings revealed that teachers' PD participation was substantially higher for formal, centrally organised sessions including the Ministry of Education training and school-based in-service training, than for professional learning communities and peer teacher groups or regular participation beyond annual activities. Qualitative and documentary evidence corroborated these findings: PD attendance registers and training certificates were present in 90.6% and 84.4% of schools respectively, while CSOs and HOIs described training as irregular and largely conducted annually. The study recommends that the Teachers Service Commission (TSC) provide continuous, equitable PD opportunities, and that schools establish professional learning communities to sustain teacher growth beyond formal training sessions.

Keywords: professional development, instructional delivery, junior schools, teacher participation, response rate, Turkana East Sub-County

INTRODUCTION

Education systems across the world continue to experience rapid transformation driven by curriculum reforms, technological advancements, globalization and the increasing demand for learners equipped with 21st-century competencies (OECD, 2022). These changes have redefined teachers' roles from transmitters of knowledge to facilitators of learning, requiring them to adopt learner-centred pedagogies, integrate technology, and apply competency-based assessment and inclusive instructional strategies. As primary agents of this change, teachers must continuously update their knowledge and skills, and Professional Development (PD) has emerged as a central mechanism for strengthening their instructional capacity (Liu et al., 2025).

PD refers to structured, ongoing learning experiences that build teachers' pedagogical knowledge, subject mastery, and assessment practices and, unlike pre-service training, supports continuous growth throughout a teacher's career (Waheed & Mirwan, 2022). Well-designed PD characterised by content focus, active learning,

collaboration, and sustained duration is associated with improved instructional strategies and increased learner engagement (Samundeeswari et al., 2024).

In Kenya, the implementation of Competency Based Education (CBE) requires teachers to move from the traditional, content-driven and examination-oriented approach of teaching to a learner-centred approach involving formative assessment, differentiated instruction, and critical thinking (Kiprop, Kipkurui & Rotich, 2022; Gitonga & Khaemba, 2020). Comparable shifts have been documented in other Competency-Based Education reforms within East Africa (Ndayisenga, 2025), reflecting the broader, region-wide scale of the pedagogical transition teachers are expected to make.

To support this reform, the Kenya Institute of Curriculum Development (KICD) and TSC have implemented nationwide professional development programs, including the retooling of teachers, mentorship programs, in-service training, and school-based professional learning communities (Nyonje & Kidombo, 2024). These initiatives reflect a national commitment to positioning PD as a primary vehicle for CBE implementation across all cadres of basic education.

This study therefore sought to determine the extent of teachers' participation in professional development activities for instructional delivery in junior schools in Turkana East Sub-County, Turkana County, Kenya, seeking to generate context-specific evidence on teachers' participation in PD, the relationship between PD and instructional delivery, and the contextual challenges influencing the application of professional learning in classroom practice.

METHODOLOGY

Research Design and Study Area

The study was conducted in Turkana East Sub-County, Kenya, and adopted a descriptive survey design within a convergent parallel mixed-methods approach, in which quantitative and qualitative strands were accorded equal priority, implemented concurrently, and merged during interpretation.

Target Population, Sample and Sampling Procedure

The target population comprised 140 public Junior School (JS) teachers, 32 Heads of Institutions (HOIs), and 2 Curriculum Support Officers (CSOs) drawn from all 32 public JS in the sub-county. A census approach was used for the 32 schools, all 32 HOIs, and both CSOs, while simple random sampling — using Yamane's (1967) formula at a 5% margin of error — was applied to select 104 of the 140 teachers, giving each teacher an equal chance of selection and minimising selection bias. This yielded a target sample of 138 respondents (104 teachers, 32 HOIs, 2 CSOs).

Data Collection Instruments

Data were collected using a structured questionnaire, a semi-structured interview schedule for HOIs and CSOs, a classroom observation checklist, and a document analysis guide. The questionnaire scale addressing the extent of teachers' PD participation, reported in this article, comprised four items measured on a five-point Likert scale (Strongly Disagree to Strongly Agree). The interview schedule elicited HOIs' and CSOs' perspectives on the frequency and nature of PD activities; the observation checklist recorded selected classroom-practice indicators (e.g., presence of a lesson plan, stated lesson objectives) as observed/not observed; and the document analysis guide recorded the availability of PD attendance registers, training certificates, and related school records.

Validity of the Research Instruments

Content validity was established through review by two experienced researchers, departmental colleagues, and two university supervisors, who assessed whether questionnaire items comprehensively represented the construct of PD participation; items were revised based on their feedback to improve coverage and clarity.

Face validity was established by presenting the instruments to the same supervisors and to experienced JS teachers outside the study sample, to check clarity, relevance, and readability. Questionnaire items were also deliberately aligned with the study's objectives and research questions to strengthen content relevance.

Reliability of the Research Instruments

Reliability was assessed through a pilot study conducted in Turkana South Sub-County, a neighbouring sub-county with comparable geographical, socio-economic, and educational characteristics; respondents who took part in the pilot were excluded from the main study to avoid contamination of results. A test–retest procedure was used, in which the questionnaire was administered twice to the same pilot respondents at a two-week interval, and Cronbach's Alpha was computed to assess internal consistency. For the four-item scale addressing the extent of teachers' PD participation, reported in this article, Cronbach's Alpha was .76, indicating acceptable internal consistency

Table 1: Reliability of the Questionnaire

Construct	No. of Items	Cronbach's Alpha	Interpretation
Extent of teachers' participation in professional development activities for instructional delivery	4	.76	Acceptable

Data Collection Procedure and Ethical Considerations

Following an introductory letter from the University of Eldoret, Department of Curriculum and Instruction, the researcher obtained a research licence from the National Commission for Science, Technology and Innovation (NACOSTI), and thereafter secured authorisation from the Turkana County Commissioner, the Turkana County Director of Education, and the Turkana East Sub-County Education Office before approaching sampled schools.

Ethical considerations were addressed as follows. Informed consent was obtained from all participants after they were given information about the purpose of the study, the procedures involved, the expected duration, and any risks or benefits; participation was voluntary, and participants were informed of their right to withdraw at any stage without penalty. Confidentiality and anonymity were maintained throughout: respondents were not required to write their names, and unique codes were used in place of identifying information during data analysis and reporting. Data protection measures included storing completed questionnaires and interview records in locked cabinets and keeping electronic data in password-protected files accessible only to the researcher and approved academic supervisors; data are to be retained for five years after completion of the study and thereafter securely destroyed in line with the university's research data management policy.

Data Analysis Procedure

Quantitative data from the questionnaire were coded and analysed in SPSS version 30 using descriptive statistics that is frequencies, percentages, means, and standard deviations to summarise the extent of teachers' PD participation. Qualitative data from interviews with HOIs and CSOs were transcribed and analysed thematically, with themes developed inductively around the frequency, nature, and continuity of PD activities. Observation and document-analysis data were analysed descriptively and used, together with the interview data, to corroborate the questionnaire findings through triangulation.

RESULTS AND DISCUSSION

Response Rate

The study achieved a high overall response rate. Of the 104 targeted teachers, 100 completed and returned the questionnaire, a response rate of 96.2%. Of the 32 targeted HOIs, 28 participated in the interviews (87.5%), while both targeted CSOs participated (100%). Against the overall target sample of 138 respondents, 130 were

achieved, an overall response rate of 94.2% (Table 2). The eight non-responses (4 teachers, 4 HOIs) are attributed to unavailability during the data collection period; according to Mugenda and Mugenda (2003), a response rate of 70% and above is adequate for analysis and reporting, and the response rate achieved here was therefore considered sufficient to support valid analysis and interpretation of the findings. All percentages and means reported in this article are based on the achieved sample of 100 teachers (for the questionnaire) and 28 HOIs and 2 CSOs (for the interviews).

Table 2: Response Rate

Category	Target Respondents	Actual Respondents	Response Rate (%)
JS Teachers	104	100	96.2
Heads of Institutions (HOIs)	32	28	87.5
Curriculum Support Officers (CSOs)	2	2	100.0
Total	138	130	94.2

Extent of Teachers' Participation in Professional Development Activities

Teachers were asked to indicate their level of agreement with four statements on a five-point Likert scale: Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA). Table 3 presents the quantitative findings on teachers' extent of PD participation (n = 100).

Table 3: Teachers' Participation in Professional Development Activities for Instructional Delivery (n = 100)

Statement	Descriptive	SD	D	N	A	SA	Mean
I attend professional development training organized by the Ministry of Education.	Frequency	12	8	2	44	34	3.80
	Percentage	12.0	8.0	2.0	44.0	34.0	
I participate in in-service training organized by the school.	Frequency	6	16	2	56	20	3.68
	Percentage	6.0	16.0	2.0	56.0	20.0	
I engage in professional learning communities and peer teacher groups.	Frequency	58	22	4	10	6	1.84
	Percentage	58.0	22.0	4.0	10.0	6.0	
I attend professional development activities regularly, not once in a year.	Frequency	32	50	2	10	6	2.08
	Percentage	32.0	50.0	2.0	10.0	6.0	

Table 3 shows that PD participation was substantially higher for the formal, MOE- and school-organised components of training than for the informal and sustained components. A majority of teachers reported attending professional development training organised by the Ministry of Education (44% agreed, 34% strongly agreed; Mean = 3.80) and participating in school-organised in-service training (76% agreed; Mean = 3.68), suggesting that teachers' engagement with PD is concentrated in centrally coordinated, mandatory sessions rather than being self-driven.

Regarding professional learning communities and peer teacher groups, 58% of teachers strongly disagreed and 22% disagreed, while only 16% agreed that they engage in such structures (Mean= 1.84). Similarly, only 16% agreed that they attend PD activities regularly rather than once a year (Mean = 2.08). The comparatively large standard deviations on these two items indicate more dispersed views among teachers than the relatively high, tightly clustered agreement seen for formal MOE and school-based training. Together, these results suggest that PD in Turkana East Sub-County is delivered mainly as a periodic, externally scheduled event rather than being sustained through peer collaboration or embedded in teachers' routines.

To complement the quantitative findings, interviews were conducted with 2 CSOs and 28 HOIs (see Response Rate, above) to gain deeper insight into the extent of teachers' PD participation. On the frequency of PD attendance, responses varied, reflecting the inconsistent organisation of training in the sub-county. One CSO indicated that training was organised irregularly by the Ministry, with teachers attending at least two sessions per year, while another noted that training had been regular during the first cohort intake but had since declined sharply. Most HOIs reported that training occurred once a year, suggesting that PD opportunities are not evenly distributed across schools.

Irregularly, due to the Ministry of Education planning, at least two sessions. — CSO 1, personal communication, May 2026

It is done at least once per year. — HOI A, personal communication, May 2026

The observation checklist and document analysis results corroborate the questionnaire findings on the extent of teachers' PD participation. Classroom observation established that most teachers had written lesson plans and stated lesson objectives clearly, while document analysis revealed that PD attendance registers were present in 29 of 32 schools (90.63%) and PD training certificates in 27 schools (84.38%). This convergence of observed classroom practice and documentary evidence with the high questionnaire means recorded for Ministry of Education training (Mean = 3.80) and school-based in-service sessions (Mean = 3.68) confirms that teachers' PD participation in Turkana East Sub-County is genuinely high at the extent of formal attendance.

Findings from the questionnaire, interviews, observation checklist and documentary analysis point to the same picture. High questionnaire means for Ministry of Education training (Mean = 3.80) and school-based in-service training (Mean = 3.68) are corroborated by observed lesson planning and clearly stated objectives, and by documented attendance registers (90.63%) and certificates (84.38%). The CSOs and HOIs confirmed that PD activities occur irregularly rather than continuously.

The findings show that teachers' participation in PD activities in public junior schools in Turkana East Sub-County was concentrated in formal, centrally organised sessions rather than sustained, self-driven engagement. A majority of teachers reported attending Ministry of Education training (Mean = 3.80) and school-based in-service sessions (Mean = 3.68), yet very few reported engaging in PLCs or peer teacher groups (Mean = 1.84), or attending PD regularly rather than once a year (Mean = 2.08).

These findings align with the Sims et al. (2021) systematic review, which distinguishes one-off workshop attendance from substantive participation involving sustained, collaborative, practice-embedded learning; the dominance of formal, mandatory sessions over informal, continuous engagement observed here mirrors that broader concern that attendance alone is an inadequate proxy for meaningful professional growth. The findings also align with Kiprop et al. (2022), who documented logistical and infrastructural barriers constraining the frequency and depth of PD participation among Turkana teachers, and with Gitonga and Khaemba (2020), who observed that rural Kenyan teachers frequently participate in single-cycle workshops without follow-up coaching or peer collaboration. More broadly, this pattern mirrors evidence from across Sub-Saharan Africa showing that centrally delivered, one-size-fits-all training remains the dominant PD provision model despite calls for more school-based, peer-driven, and contextually grounded approaches (Bekele, Tadesse & Haile, 2026; Mitchell et al., 2024), and is consistent with calls for more strategic, sustained leadership of PD provision within the Kenyan system specifically (Mabele, Likoko & Onyango, 2023).

Existing studies had largely examined PD participation at national or regional levels, with limited disaggregated evidence on the frequency, intensity, and continuity of participation among JS teachers specifically within Turkana East Sub-County. This constituted a contextual and empirical gap that the present study addressed by generating sub-county-specific evidence on the extent and continuity of teachers' PD participation, extending the literature beyond aggregate national patterns to the lived realities of teachers in an arid and semi-arid region.

The findings are discussed in relation to Guskey's Theory of Teacher Change (1986, 2002), the framework

adopted for this study. Guskey's model identifies participants' reaction to training, participants' learning, organisational support and change, participants' use of new knowledge and skills, and improved student learning outcomes as sequential levels through which PD is expected to influence practice. The evidence generated in this study speaks directly to teachers' exposure to, and frequency of PD activities, corresponding most closely to the initial, exposure-based level of Guskey's model and shows that this exposure is concentrated in formal, centrally organised sessions rather than sustained, peer-driven engagement. However, because this study did not directly measure organisational support, teachers' application of newly acquired knowledge and skills in the classroom, or learner outcomes, it cannot establish whether or how far this participation progressed through the later levels of Guskey's model. The low reported PLC/peer-group participation ($M = 1.84$) and low regularity of PD attendance ($M = 2.08$) are consistent with the concern that irregular, one-off training may not create the conditions needed for progression to these later levels; however, the causal relationship between PD participation and instructional-delivery change is addressed under the study's second objective and is not a claim made by the data reported in this article.

Overall, both quantitative and qualitative data indicate that teachers reported substantial participation in PD activities organised by the Ministry of Education and by schools in Turkana East Sub-County, but minimal engagement in continuous professional learning activities such as PLCs and peer teacher groups. Data from questionnaires, interviews, observations, and document analysis converge on the same pattern: teachers attend formal PD, but participation is episodic rather than continuous. This suggests that formal PD activities provide teachers with a substantial base of exposure to training, while sustained, practice-embedded professional learning and its effect on instructional delivery, which this study did not measure directly, would need to be examined separately to determine how it translates acquired knowledge into classroom practice.

CONCLUSION

Summary of Findings

The study established that teachers' participation in PD activities in public Junior Schools in Turkana East Sub-County was inclined heavily towards formally organised training provided through the MOE and school-based in-service sessions. Continuous professional learning activities, including professional learning communities and peer collaboration, remained limited. Qualitative and documentary evidence corroborated this pattern, showing high formal attendance (documented in up to 90.6% of schools) alongside irregular, largely annual training cycles without structured follow-up.

Conclusion

The study concludes that public JS teachers in Turkana East Sub-County participated substantially in formally organised, centrally scheduled PD activities, particularly Ministry of Education training and school-based in-service sessions while participation in continuous, collaborative forms of professional learning remained limited. This pattern of participation corresponds most closely to the initial, exposure-based level of Guskey's Theory of Teacher Change. Because the data collected for this objective measured the extent and frequency of participation rather than instructional-delivery outcomes, the study does not conclude that this participation caused or enhanced instructional delivery; establishing that link requires the relational evidence addressed under the study's second objective. What can be concluded is that the irregular, largely annual nature of PD, combined with minimal peer-driven follow-up, is likely to constrain the conditions such as sustained organisational support and opportunities to apply new knowledge in practice that Guskey's model identifies as necessary for PD to progress toward improved instructional delivery.

RECOMMENDATIONS

1. The TSC should provide continuous and equitable professional development opportunities for all JS teachers, particularly in remote schools, to promote consistent participation and effective CBE implementation.

2. School administrators and CSOs should establish professional learning communities and regular peer-collaboration structures to sustain teacher learning beyond formal, once-a-year training sessions.

Suggestions for Further Research

1. Conduct a longitudinal study to evaluate the long-term relationship between contextually designed PD programmes and teachers' instructional delivery and learner outcomes in JS within ASAL regions of Kenya.
2. Investigate the effectiveness of school-based professional learning communities and peer mentorship as a sustainable model for continuous PD among JS teachers in resource-constrained environments.

REFERENCES

1. Bekele, T., Tadesse, D., & Haile, S. (2026). Teacher professional development in Sub-Saharan Africa: What works, for whom, and why? A critical review. *Open Journal of Educational Research and Practice*, 2(1), 50–62. <https://doi.org/10.65965/sentam.202512.pz6gRafH>
2. Gitonga, L., & Khaemba, E. N. (2020). *International Journal of Current Research*, 12(7), 13456–13465.
3. Guskey, T. R. (1986). Staff development and the process of teacher change. *Educational Researcher*, 15(5), 5–12.
4. Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching*, 8(3), 381–391.
5. Kiprop, C., Kipkurui, S., & Rotich, K. (2022). Implementation of curriculum reforms in pastoral communities: Challenges and possibilities in Turkana County, Kenya. *East African Journal of Education Studies*, 5(3), 45–58.
6. Liu, J., Wang, K., & Pan, Z. (2025). The effectiveness of professional development in the self-efficacy of in-service teachers in STEM education: A meta-analysis. *Behavioral Sciences*, 15(10), 1364.
7. Mabele, W. S., Likoko, S. N., & Onyango, P. O. (2023). Future of teacher professional development in Kenya: Strategic leadership approach. *European Journal of Education Studies*, 10(1). <https://doi.org/10.46827/ejes.v10i1.4658>
8. Mitchell, R., Ayinselya, R. A., Barrett, A. M., Cortez, A., David, O., Imaniriho, D., Nwako, Z., Reda, N. W., & Singh, M. (2024). Teacher professional development in Africa: A critical synthesis of African research evidence. *Zenodo*. <https://doi.org/10.5281/zenodo.10944685>
9. Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches*. Acts Press.
10. Ndayisenga, J. D. A. (2025). The impact of competency-based curriculum in enhancing learning outcomes: A study of Rwandan secondary schools. *Journal of Education, Learning, and Management*, 2(2), 144–151.
11. Nyonje, R., & Kidombo, H. (2024). Kenya country report. [PUBLISHER/SOURCE DETAILS TO BE COMPLETED BY AUTHOR — full bibliographic information not available in the current source materials.]
12. OECD. (2022). *Teachers' professional learning study (TPLS): Insights on professional development*. OECD Publishing.
13. Samundeeswari, D., Angayarkanni, R., Raju, G., Rana, N., & Sharma, A. (2024). Teacher professional development: Effective strategies and evaluation methods. *Educational Administration: Theory and Practice*, 30(6), 1726–1733.
14. Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Van Herwegen, J., & Anders, J. (2021). What are the characteristics of effective teacher professional development? A systematic review and meta-analysis. Education Endowment Foundation.
15. Uakarn, C., Chaokromthong, K., & Sintao, N. (2021). Sample size estimation using Yamane and Cochran and Krejcie and Morgan and Green formulas and Cohen statistical power analysis by G*Power and comparisons. *Apheit International Journal of Interdisciplinary Social Sciences and Technology*, 10(2), 76–86.



16. Waheed, Z., & Mirwan, R. (2022). Continuous professional development and its impacts on teachers' pedagogy. *Pakistan Journal of Educational Research*, 5(2), 528. <https://doi.org/10.52337/pjer.v5i2>
17. Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.
18. Challenges in implementation of the competency-based curriculum in primary schools in Kenya.