Novelty Journals

ISSN 2394-9686

International Journal of Novel Research in Education and Learning
Vol. 13, Issue 6, pp: (1-9), Month: November - December 2026, Available at: www.noveltyjournals.com

RELATIONSHIP BETWEEN SELECTED PROFESSIONAL DEVELOPMENT PROGRAMMES AND TEACHERS' JOB PERFORMANCE IN DELTA STATE PUBLIC SECONDARY SCHOOLS

DAFIAGHOR, Charity[1], ASIYAI, Romina I[2], AKPOREHE, Dorah A[3]

Department of Educational Management and Foundations Delta State University Abraka.

DOI: https://doi.org/10.5281/zenodo.23880044

Published Date: 02-November-2026

Abstract: **This study examined the relationship between three professional development (PD) programmes (in-service training, workshop participation and conference attendance) and teachers' job performance in public secondary schools in Delta State, Nigeria. An *ex-post-facto* design incorporating descriptive and correlational survey methods was adopted. From a target population of 11,070 principals and teachers in 463 public secondary schools, 480 respondents (100 principals and 380 teachers) from 100 schools were selected through multi-stage sampling. Data were collected with the Teachers' Performance Questionnaire (TPQ) and the Professional Development Programmes Questionnaire (PDPQ), both 4-point scales (sub-scale reliability α = .79–.88; pilot n = 30), and analysed in SPSS version 26 using means, standard deviations, the coefficient of determination (r^2), and Pearson's product-moment correlation (r) at the .05 level. In-service training (r = .198), workshop participation (r = .196) and conference attendance (r = .242) were each positively and significantly related to teachers' performance (all p < .001). The relationships were low, accounting for 3.9%, 3.8% and 5.9% of the variance in teachers' performance respectively. Participation in PD programs is positively associated with teachers' performance, but participation alone explains very little of it. PD policy in Delta State should therefore attend to the design quality of programs (content focus, practice and follow-up) as well as access, and should recognise other school-level determinants of performance.**

Keywords: **Professional Development; in-service training; workshop participation; conference attendance; teachers' job performance; Delta State; Nigeria.**

1. INTRODUCTION

Teachers are a central determinant of what students learn, and an education system's capacity to deliver quality depends heavily on how well its serving teachers keep their knowledge and practice up to date. Professional development (PD) is the principal instrument governments use to upgrade the skills of practising teachers (Popova et al., 2022). Nigeria's National Policy on Education makes provision for the continuing education and in-service training of teachers (Federal Republic of Nigeria, 2013), and State authorities, school boards and principals routinely organise or sponsor in-service courses, workshops and conferences for teachers in public secondary schools.

The international evidence on what PD achieves is, however, mixed. Reviews show that well-designed PD can improve teaching practice and pupil outcomes, but average effects are modest and vary widely with program design (Kennedy, 2016; Sims et al., 2025). Causal studies of coaching find larger effects on instruction than on pupil achievement, and effects shrink

when programs are taken to scale (Kraft et al., 2018). In low- and middle-income countries, government-funded programs at scale tend to lack features associated with effectiveness, namely incentives to participate, opportunities to practise new skills and follow-up in the classroom (Popova et al., 2022). A recent synthesis of African research likewise reports that one-size-fits-all provision often undermines, rather than strengthens teachers' situated knowledge and agency (Mitchell et al., 2024).

Nigerian studies generally report positive and significant relationships between PD and teachers' performance in Ogun, Ondo, Niger and Oyo States (Ajetunmobi et al., 2020; Akinnola, 2020; Ayeni & Akunkpimi, 2026; Ibrahim, 2021). Many of these studies, however, treat PD as a single composite. To the best of our knowledge, the separate contribution of in-service training, workshops and conferences has received comparatively little attention in Delta State public secondary schools. The present study addresses this gap by examining each program separately, using responses from both principals and teachers.

2. STATEMENT OF THE PROBLEM

Public secondary schools in Delta State, like those elsewhere in Nigeria, depend largely on in-service training, workshops and conferences to update teachers' skills. Resources for these programs are limited. Evidence from another Nigerian State suggests that teachers rarely participate in them (Akinnola, 2020), and the wider literature shows that programs run at scale often omit the practice and follow-up that make PD effective (Popova et al., 2022). School authorities therefore risk investing scarce funds in programs whose relationship with teachers' performance is unknown, without knowing which program type is most closely associated with performance. Earlier work in Delta State has focused on a single metropolis (Opuana, 2016) or on colleges of education (Igbodo & Nwalado, 2022), leaving public secondary schools across the State less well documented. The problem of this study, therefore, was to determine whether and how strongly in-service training, workshop participation and conference attendance are related to teachers' job performance in Delta State public secondary schools.

Research Questions

The following research questions were raised:

1. How is in-service training related to teachers' performance?
2. How is workshop participation related to teachers' performance?
3. How is conference attendance related to teachers' performance?

Hypotheses

The following hypotheses were formulated:

1. In-service training is not significantly related to teachers' performance.
2. Workshop participation is not significantly related to teachers' performance.
3. Conference attendance is not significantly related to teachers' performance.

3. LITERATURE REVIEW

PD programs rest on different theories of how teachers learn and how learning changes teaching (Kennedy, 2016), so the term covers many activities. In this study, in-service training refers to structured courses or training sessions that teachers attend while in service; workshop participation refers to participation in short, practice-oriented sessions on specific instructional skills; and conference attendance refers to attending professional gatherings where teachers exchange knowledge and encounter new ideas. Teachers' job performance refers to how effectively teachers carry out their instructional and related duties, which include preparing lesson plans and delivering the curriculum (Ayeni & Akunkpimi, 2026).

Desimone's (2009) framework proposes that PD with core features (content focus, active learning, coherence, sufficient duration and collective participation) increases teachers' knowledge and beliefs, which changes classroom practice and, in turn, student outcomes. Participation in a program is thus only a proxy for the learning it produces, and the benefit depends

on how the program is designed. Opfer and Pedder (2011) add that teacher learning emerges from the interaction of the teacher, the school and the learning activity, so no single activity should be expected to determine practice on its own. More recently, Sims et al. (2025) argue that effective PD combines components that build teachers' insight, motivation, technique and practice. Together these perspectives lead to a clear expectation: PD participation should be positively related to performance, but the relationship should be modest.

A review of 35 rigorous studies identified seven shared features of effective PD, including content focus, active learning, collaboration, expert coaching, feedback and sustained duration (Darling-Hammond et al., 2017). A meta-analysis of 60 causal studies of coaching found pooled effects of 0.49 standard deviations on instruction and 0.18 on achievement, with much smaller effects in large-scale trials than in small efficacy trials (Kraft et al., 2018). A meta-analysis of PD and pupil reading outcomes reported a pooled effect of g = 0.225, with significant effects for programs under 30 hours but not for longer ones (Basma & Savage, 2018). In early childhood settings, in-service training improved process quality (Egert et al., 2018). Not all of this consensus is secure, however: Sims and Fletcher-Wood (2021) argue that the reviews behind the list of "effective" features rest on weak inference methods, and Sims et al. (2025), in a meta-analysis of 104 randomised trials, found only qualified support for a theory of what makes PD work. The evidence therefore supports a cautious position: PD can help, but the size of the effect depends on design and implementation.

In sub-Saharan Africa, dominant PD modalities tend to be one-size-fits-all, although the evidence also points to fertile ground for more inclusive and empowering provision (Mitchell et al., 2024). Within Nigeria, a correlational survey of 504 participants in Ogun State public secondary schools found that teachers' job performance was significantly and positively related to PD (Ajetunmobi et al., 2020). In Oyo State, teacher training programmes (courses, workshops, seminars and academic conferences) had a significant combined influence on teacher job performance, although teachers rarely participated in them (Akinnola, 2020). In Ondo North, PD programmes were significantly related to instructional task performance (r = .336) in a sample of 28 principals and 280 teachers (Ayeni & Akunkpimi, 2026), and a study in Niger State concluded that training programmes play a vital role in teachers' performance (Ibrahim, 2021). Studies from other African countries are consistent. In Ghanaian senior high schools, curriculum-related in-service training was reported as the most effective type and was positively related to teacher performance (Gabriel-Wettey et al., 2025), and in Kenya the perceived quality of in-service training was related to teacher commitment (Ouro et al., 2024).

Research that isolates workshops and conferences is thinner. Conferences and workshops were found to influence the professional growth of secondary school economics teachers in Nasarawa State, Nigeria, and the authors recommended long-term funding for attendance (Allahnana & Ozock, 2025). In Asaba, Delta State, in-service training and conferences were reported to have improved teachers' performance, whereas workshops were not properly carried out, which led to the rejection of one hypothesis (Opuana, 2016). Staff development programmes were also reported to influence teachers' effective performance in Delta State colleges of education (Igbodo & Nwalado, 2022). These studies suggested a positive but modest association, with implementation quality as an important moderating condition, and little evidence that disaggregates the three program types across Delta State public secondary schools. This study was designed to fill that gap.

4. METHOD

This study adopted an *ex-post-facto* research design incorporating descriptive and correlational survey methods to professional development programs, and teachers' performance. From a target population of 11,070 principals and teachers across 463 public secondary schools, a sample of 480 respondents (100 principals and 380 teachers) was selected across 100 schools using a multi-stage sampling procedure comprising purposive, stratified, and simple random sampling techniques, adhering to the sample size principles of Krejcie and Morgan (1970). Data were collected using two structured 4-point Likert scale instruments: the Teachers' Performance Questionnaire (TPQ) and Professional Development Program Questionnaire (PDPQ), which were validated for face and content validity by educational administration and measurement experts. Internal consistency was confirmed via Cronbach's alpha in a pilot study of 30 respondents, yielding reliability coefficients ranging from 0.79 to 0.88 across all sub-scales. Questionnaires were administered directly by the researcher and four trained research assistants with introductory permission from school administrators. Data were analyzed using SPSS (version 26), employing descriptive statistics of coefficient of determination, while Pearson's product-moment correlation (r) was utilized to test the research hypotheses at a 0.05 level of significance.

Novelty Journals

ISSN 2394-9686

International Journal of Novel Research in Education and Learning
Vol. 13, Issue 6, pp: (1-9), Month: November - December 2026, Available at: www.noveltyjournals.com

5. RESULTS

Research Question 1: How is in-service training related to teachers' performance?

Table 1: Relationship between in-service training and teachers' performance

Variables	$\bar{x}$	Std. Dev.	R	r^2	r^2%	Decision
In-service training	2.62	0.88	.198	.036	3.6	Positive relationship
Teachers' performance	2.71	0.83				

Table 4.13 presents the relationship between in-service training and teachers' performance. The mean score for in-service training was 2.62, with a standard deviation of 0.88, while teachers' performance had a mean score of 2.71 and a standard deviation of 0.83. The correlation coefficient of (r = .198) indicates a positive relationship between in-service training and teachers' performance. This suggests that greater participation in in-service training tends to be associated with improved teachers' performance. The coefficient of determination (r^2 = .036) indicates that in-service training shares approximately 3.6% of the variance in teachers' performance. The remaining 96.4% may be associated with other factors not examined in this analysis. Therefore, in-service training has a positive relationship with teachers' performance.

Research Question 2: How is workshop participation related to teachers' performance?

Table 2: Relationship between workshop participation and teachers' performance

Variables	$\bar{x}$	Std. Dev.	R	r^2	r^2%	Decision
Workshop participation	2.68	0.87	.196	.033	3.3	Positive relationship
Teachers' performance	2.71	0.83				

Table 4.14 shows the relationship between workshop participation and teachers' performance. The mean score for workshop participation was 2.68, with a standard deviation of 0.87, while teachers' performance had a mean score of 2.71 and a standard deviation of 0.83. The correlation coefficient of (r = .196) indicates a positive relationship between workshop participation and teachers' performance. This implies that increased participation in workshops tends to be associated with better teachers' performance. The coefficient of determination (r^2 = .033) indicates that workshop participation shares approximately 3.3% of the variance in teachers' performance. The remaining 96.7% may be associated with other factors not examined in this analysis. Therefore, workshop participation has a positive relationship with teachers' performance.

Research Question 3: How is conference attendance related to teachers' performance?

Table 3: Relationship between conference attendance and teachers' performance

Variables	$\bar{x}$	Std. Dev.	R	r^2	r^2%	Decision
Conference attendance	2.58	0.82	.242	.054	5.4	Positive relationship
Teachers' performance	2.71	0.83				

Table 3 presents the relationship between conference attendance and teachers' performance. The mean score for conference attendance was 2.58, with a standard deviation of 0.82, while teachers' performance had a mean score of 2.71 and a standard deviation of 0.83. The correlation coefficient of (r = .242) indicates a positive relationship between conference attendance and teachers' performance. This suggests that greater attendance at conferences tends to be associated with better teachers' performance, possibly through opportunities for professional interaction, knowledge sharing and exposure to new teaching practices. The coefficient of determination (r^2 = .054) indicates that conference attendance shares approximately 5.4% of the variance in teachers' performance. The remaining 94.6% may be associated with other factors not examined in this analysis. Therefore, conference attendance has a positive relationship with teachers' performance.

Novelty Journals

ISSN 2394-9686

International Journal of Novel Research in Education and Learning
Vol. 13, Issue 6, pp: (1-9), Month: November - December 2026, Available at: www.noveltyjournals.com

Hypothesis 1: In-service training is not significantly related to teachers' performance.

Table 4: Pearson r on in-service training and teachers' performance

		In-service Training	Teachers' performance
In-service Training	Pearson Correlation	1	.198
	Sig. (2-tailed)		.001
	N	480	480
Teachers' performance	Pearson Correlation	.198	1
	Sig. (2-tailed)	.001	
	N	480	480

Significant at 0.05

Table 4 presents the Pearson product-moment correlation analysis of the relationship between in-service training and teachers' performance. The result shows a correlation coefficient of (r = .198), with a significance value reported as .001, based on 480 respondents. Since the significance value is less than the 0.05 level of significance, the relationship between in-service training and teachers' performance is statistically significant. Consequently, the null hypothesis is rejected. This finding indicates a statistically significant positive relationship between in-service training and teachers' performance. It suggests that teachers who participate in in-service training tend to demonstrate better performance than would be expected in the absence of this positive association.

Hypothesis 2: Workshop participation is not significantly related to teachers' performance.

Table 5: Pearson r on workshop participation and teachers' performance

		Workshop	Teachers' performance
Workshop	Pearson Correlation	1	.196
	Sig. (2-tailed)		.001
	N	480	480
Teachers' performance	Pearson Correlation	.196	1
	Sig. (2-tailed)	.001	
	N	480	480

Significant at 0.05

Table 5 presents the Pearson product-moment correlation analysis of the relationship between workshop participation and teachers' performance. The result reveals a correlation coefficient of (r = .196), with a significance value reported as .001, based on 480 respondents. Since the significance value is less than the 0.05 level of significance, the relationship is statistically significant. Therefore, the null hypothesis is rejected. This finding indicates a statistically significant positive relationship between workshop participation and teachers' performance. It suggests that teachers' participation in workshops is associated with better performance, although the strength of the relationship is relatively weak.

Hypothesis 3: Conference attendance is not significantly related to teachers' performance.

Table 6: Pearson r on conference attendance and teachers' performance

		Conference	Teachers' performance
Conference	Pearson Correlation	1	.242
	Sig. (2-tailed)		.001
	N	480	480
Teachers' performance	Pearson Correlation	.242	1
	Sig. (2-tailed)	.001	
	N	480	480

Significant at 0.05

Table 6 presents the Pearson product-moment correlation analysis of the relationship between conference attendance and teachers' performance. The result indicates a correlation coefficient of (r = .242), with a significance value reported as .001, based on 480 respondents. Since the significance value is less than the 0.05 level of significance, the relationship between conference attendance and teachers' performance is statistically significant. Accordingly, the null hypothesis is rejected. This finding indicates a statistically significant positive relationship between conference attendance and teachers' performance. It suggests that conference attendance is associated with better teachers' performance, potentially through professional networking, knowledge acquisition and the exchange of instructional experiences.

6. DISCUSSION OF RESULTS

The first finding was a low but significant positive relationship between in-service training and teachers' performance ($r = .198$, $p < .001$). This finding supports earlier Nigerian and African evidence. Ajetunmobi et al. (2020) found that teachers' job performance in Ogun State public secondary schools was significantly and positively related to PD. Akinnola (2020) reported a significant combined influence of teacher training programmes on teacher job performance in Oyo State. Ibrahim (2021) concluded that training programmes play a vital role in the performance of secondary school teachers in Niger State, and Opuana (2016) reported that in-service training was associated with improved teacher performance in Asaba, Delta State. Beyond Nigeria, Gabriel-Wettey et al. (2025) found that curriculum-related in-service training was positively related to teacher performance in Ghanaian senior high schools, and Ouro et al. (2024) linked the perceived quality of in-service training to teacher commitment in Kenya. The present result is smaller than the r = .336 reported for a composite of PD programmes in Ondo North (Ayeni & Akunkpimi, 2026). This is unsurprising, since a composite aggregates several activities, and the two studies differ in instruments, samples and States. A further likely reason is that the PDPQ captures how much teachers take part rather than how good, how long or how well followed-up the training was. Those design features are what the PD literature treats as decisive (Darling-Hammond et al., 2017; Popova et al., 2022).

Workshop participation was likewise positively and significantly related to teachers' performance ($r = .196$, $p < .001$). This is consistent with Allahnana and Ozock (2025), who found that attending workshops and conferences significantly influenced the professional growth of secondary school teachers in Nasarawa State, and with studies in which workshops were among the training modalities positively related to performance (Akinnola, 2020; Gabriel-Wettey et al., 2025; Ibrahim, 2021). The modest size of the relationship is also in line with Opuana's (2016) observation that workshops in Asaba were not properly carried out, which weakened their link with performance. Workshops that are short, one-off and without classroom follow-up are unlikely to change practice much, and evidence from low- and middle-income countries suggests that follow-up visits and opportunities to rehearse new skills are among the features most associated with learning gains (Popova et al., 2022). Evidence from coaching studies points in the same direction: sustained support with feedback produces larger improvements in instruction than one-time training (Kraft et al., 2018).

Conference attendance showed the strongest relationship with teachers' performance ($r = .242$, $p < .001$), even though it had the lowest mean participation score ($M = 2.58$). This supports Allahnana and Ozock (2025) and Opuana (2016), who reported that conferences were beneficial for teachers' professional growth and performance, and is consistent with the finding that staff development programmes influence teachers' effective performance in Delta State colleges of education. This finding also aligns with Asiyai (2016) who documented that professional development in-service training programmes empowered teachers with current skills, knowledge and modern pedagogical competences for quality teaching and school improvement. Conferences may be associated with performance because they expose teachers to new instructional ideas and to colleagues beyond their own school, and collective participation is a recognised feature of effective professional development (Desimone, 2009). Two cautions apply. First, because the design is correlational, selection could explain part of the pattern: conferences usually require funding, approval or sponsorship, so teachers who attend may already be more motivated or better performing. Second, the difference between $r = .242$ and $r = .196$ or .198 is small and was not tested formally, so the ranking of the three programs should not be over-interpreted.

All three relationships were statistically significant but low, each explaining under 6% of the variance in teachers' performance. Statistical significance here owes much to the sample of 480, which makes even small correlations detectable. In practical terms, correlations of about .20 are typical rather than trivial in behavioural research (Gignac & Szodorai, 2016), and the results match the expectation from theory that no single activity determines practice on its own (Desimone, 2009; Opfer & Pedder, 2011). They also echo the international finding that PD tends to produce small average effects that depend on design (Kennedy, 2016; Sims et al., 2025). The large unexplained variance indicates that teachers' performance depends heavily on factors outside PD participation, such as the quality of the PD itself, the school context and the interaction between teacher, school and learning activity (Opfer & Pedder, 2011). Finally, the finding that African PD is often one-size-fits-all (Mitchell et al., 2024) suggests that programs better matched to teachers' needs and contexts might strengthen these associations.

7. CONCLUSION

In-service training, workshop participation and conference attendance were each positively and significantly related to teachers' job performance in Delta State public secondary schools, with conference attendance showing the strongest association. The relationships were low, however, and participation in these programs accounted for between about 4% and 6% of the variance in performance. The study therefore concludes that PD participation is a worthwhile but insufficient correlate of teachers' performance. Increasing the number of teachers who attend programs is unlikely, on its own, to produce large gains in performance. The quality, relevance and follow-up of programs, and the school conditions in which teachers apply what they learn, probably matter as much as access.

Limitations and suggestions for further research

The findings should be read with several limitations in mind. The correlational design does not allow causal claims, and reverse causality and selection effects cannot be excluded. Both variables were measured by self-report on 4-point scales, which may introduce response bias. The PDPQ measures participation, not the duration, content or quality of programs. Principals and teachers were pooled into one sample, which may blur differences between how the two groups rate teachers' performance, and teachers nested within schools were analysed as independent observations. Results apply to Delta State public secondary schools and should not be generalised beyond them. Future studies could combine the three programs in a multiple regression to estimate their unique contributions, use multilevel models to account for the clustering of teachers within schools, measure program quality and duration, include objective or supervisor-rated performance indicators, and adopt longitudinal or quasi-experimental designs. Qualitative work on why workshops and conferences are or are not applied in the classroom would also help.

8. RECOMMENDATIONS

Based on the findings, the following recommendations are made:

1. The State Ministry of Education and the authorities that manage public secondary schools should continue to provide in-service training, workshops and conferences, while recognising that participation alone explains little of teachers' performance and should not be the only measure of PD success.

2. Programs should be designed around features that the PD literature associates with effectiveness, including a clear subject or skills focus, active practice, expert support and sustained duration.
3. Workshops should be followed by classroom-based support, such as mentoring, peer observation or coaching visits, so that new skills are practised and refined after the session.
4. Conference sponsorship should be funded on a sustained basis, allocated transparently, and linked to cascading, so that teachers who attend share what they learned with colleagues through school-based sessions.
5. PD should be needs-based rather than one-size-fits-all. Principals should use performance appraisal and classroom supervision to identify teachers' needs and to match them with suitable programs.
6. The Ministry and school administrators should record participation and monitor the implementation and results of PD programs, so that scarce funds go to programs that show benefit.
7. Because PD explains only a small part of performance, school authorities should also address other likely determinants of teachers' performance, such as supervision, workload, motivation and teaching resources.

REFERENCES

[1] Ajetunmobi, F. G., Oladejo, M. A., & Oladejo, M. A. (2020). Participatory management, professional development, and teachers' job performance in public secondary schools. *Journal of Learning for Development, 7*(2), 161–173. https://doi.org/10.56059/jl4d.v7i2.410

[2] Akinnola, I. F. (2020). Teacher training programmes as predictors of teacher job satisfaction and performance in Oyo State, Nigeria. *Journal of Capital Development in Behavioural Sciences, 8*(2), 16–42. https://journals.lcu.edu.ng/journals/journal-of-capital-development-in-behavioural-sciences/volume/8-2/article/teacher-training-programmes-as-predictors-of-teacher-job-satisfaction-and-performance-in-oyo-state-nigeria

[3] Allahnana, M. K., & Ozock, D. (2025). Influence of conferences and workshops attended on economics teachers' professional growth in Nasarawa State, Nigeria. *UniJos Journal of Contemporary Studies in Education, 2*(2), 131–144. https://journals.unijos.edu.ng/index.php/UJOSCE/article/view/900

[4] Asiyai, R.I. (2016). Relational Study of In-service Training, Teaching Effectiveness and Academic Performance of Students. *Journal of Teaching and Education*, USA, 5(2), 205-216.

[5] Ayeni, A. J., & Akunkpimi, T. A. (2026). Professional development programme and teachers' instructional task performance in Ondo North Senatorial District secondary schools, Nigeria. *Kwasu International Journal of Educational Management and Leadership, 1*(2), 113–120. https://journals.kwasu.edu.ng/index.php/kijemal/article/view/711

[6] Basma, B., & Savage, R. (2018). Teacher professional development and student literacy growth: A systematic review and meta-analysis. *Educational Psychology Review, 30*(2), 457–481. https://doi.org/10.1007/s10648-017-9416-4

[7] Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute. https://learningpolicyinstitute.org/sites/default/files/product-files/Effective_Teacher_Professional_Development_REPORT.pdf

[8] Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher, 38*(3), 181–199. https://doi.org/10.3102/0013189X08331140

[9] Egert, F., Fukkink, R. G., & Eckhardt, A. G. (2018). Impact of in-service professional development programs for early childhood teachers on quality ratings and child outcomes: A meta-analysis. *Review of Educational Research, 88*(3), 401–433. https://doi.org/10.3102/0034654317751918

[10] Federal Republic of Nigeria. (2013). *National policy on education* (6th ed.). NERDC Press.

[11] Gabriel-Wettey, F. K. N., Abonyi, U. K., Ahwireng, D., & Asomah, R. K. (2025). In-service education and training and teacher performance in Ghanaian senior high schools. *Journal of Issues and Practice in Education*, *17*(1), 161–183. https://doi.org/10.61538/jipe.v17i1.1724

[12] Gignac, G. E., & Szodorai, E. T. (2016). Effect size guidelines for individual differences researchers. *Personality and Individual Differences*, *102*, 74–78. https://doi.org/10.1016/j.paid.2016.06.069

[13] Ibrahim, N. (2021). *Influence of training programmes on the job performance of secondary school teachers in Niger State, Nigeria* [Unpublished dissertation]. Ahmadu Bello University, Zaria. https://kubanni.abu.edu.ng/handle/123456789/12690

[14] Igbodo, R. O., & Nwalado, H. S. (2022). Perceived influence of staff development programmes on the effective performance of teachers in colleges of education in Delta State, Nigeria. *Analele Universității din Craiova, Psihologie–Pedagogie*. https://doi.org/10.52846/aucpp.2022.1.15

[15] Kennedy, M. M. (2016). How does professional development improve teaching? *Review of Educational Research*, *86*(4), 945–980. https://doi.org/10.3102/0034654315626800

[16] Kraft, M. A., Blazar, D., & Hogan, D. (2018). The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. *Review of Educational Research*, *88*(4), 547–588. https://doi.org/10.3102/0034654318759268

[17] Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610. https://doi.org/10.1177/001316447003000308

[18] Mitchell, R., Ayinselya, R. A., Barrett, A. M., Cortez Ochoa, A. A., David, O., Imaniriho, D., Nwako, Z. A., Reda, N. W., & Singh, M. (2024). *Teacher professional development in Africa: A critical synthesis of research evidence* (Bristol Working Papers in Education No. 02/2024). University of Bristol. https://zenodo.org/records/10944685

[19] Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional learning. *Review of Educational Research*, *81*(3), 376–407. https://doi.org/10.3102/0034654311413609

[20] Opuana, H. (2016). *Impact of staff development programmes on the performance of teachers in secondary schools in Asaba Metropolis in Delta State, Nigeria* [Master's dissertation, Ahmadu Bello University]. https://kubanni.abu.edu.ng/handle/123456789/9520

[21] Ouro, A. B., Githae, P., & Kanjogu, J. (2024). Perceived quality of in-service training and teacher commitment in public secondary schools in Nyahururu Sub-County, Kenya. *International Journal of Research and Innovation in Social Science*, *8*(3S), 4760–4772. https://rsisinternational.org/journals/ijriss/articles/perceived-quality-of-in-service-training-and-teacher-commitment-in-public-secondary-schools-in-nyahururu-sub-county-kenya/

[22] Popova, A., Evans, D. K., Breeding, M. E., & Arancibia, V. (2022). Teacher professional development around the world: The gap between evidence and practice. *The World Bank Research Observer*, *37*(1), 107–136. https://doi.org/10.1093/wbro/lkab006

[23] Sims, S., & Fletcher-Wood, H. (2021). Identifying the characteristics of effective teacher professional development: A critical review. *School Effectiveness and School Improvement*, *32*(1), 47–63. https://doi.org/10.1080/09243453.2020.1772841

[24] Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Goodrich, J., Van Herwegen, J., & Anders, J. (2025). Effective teacher professional development: New theory and a meta-analytic test. *Review of Educational Research*, *95*(2), 213–254. https://doi.org/10.3102/00346543231217480