

A MULTILEVEL ANALYSIS OF FACTORS INFLUENCING TEACHERS' PROFESSIONAL DEVELOPMENT PARTICIPATION IN PUBLIC SECONDARY SCHOOLS IN DISTRICT 2 OF IKORODU LOCAL GOVERNMENT AREA OF LAGOS STATE, NIGERIA

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Abstract

This study investigates the factors influencing teachers' participation in professional development programmes within public secondary schools in District 2 of Ikorodu Local Government Area, Lagos State, Nigeria. Recognizing the critical role of professional development in enhancing teacher effectiveness and improving student outcomes, the study addresses the persistent issue of limited teacher engagement in such programmes.

A cross-sectional survey design was employed, using a multistage sampling technique to select 288 participants from fifteen public secondary schools. Data was collected through a structured questionnaire and analyzed using SPSS version 21.

Findings revealed that teacher participation in professional development was moderate (mean = 2.68). Key personal factors influencing participation included career advancement goals, a sense of school belonging, and dedication to improving student learning outcomes. At the school level, factors such as leadership support, peer collaboration, resource availability, and relevant government policies significantly affected participation. Statistical analysis showed a significant combined influence of personal and school-level factors on teacher participation ($f = 77.959, p < 0.05$).

The study concludes that targeted interventions addressing both individual and School barriers are crucial for improving participation rates. It recommends enhanced school leadership practices and equitable resource distribution to create supportive environments for continuous teacher development. These insights are vital for policymakers, school administrators, and stakeholders aiming to boost educational quality through sustained teacher professional growth.

Keywords; Teachers, Professional Development, Participation, Public Secondary Schools, Ikorodu (District 2)

Introduction

In the global education landscape, the role of the teacher is increasingly viewed as central to student learning and achievement. As educational systems evolve to respond to 21st-century challenges, the demand for teacher competence, innovation, and adaptability has intensified (Darling-Hammond et al., 2017). Professional development serves as a mechanism for continuous learning and instructional renewal. In Nigeria, however, despite policy efforts to promote PD, teachers in public secondary schools continue to exhibit low participation rates, hindered by systemic inefficiencies, economic limitations, and poor administrative support (Adeyemi & Ogunleye, 2020). This study addresses a critical gap by exploring both individual and school-level factors that either promote or hinder PD engagement. By focusing on Ikorodu District 2 a densely populated, urban educational district with diverse socioeconomic characteristics the study provides context-specific insights into how Nigerian public school teachers navigate professional learning.

Theoretical Framework

This study adopts a dual-theoretical framework combining Organizational Development Theory (ODT) and Expectancy-Value Theory (EVT). ODT emphasizes the role of organizational systems structures, leadership, communication, and resource allocation in shaping professional behavior (Cummings & Worley, 2014). It posits that organizations that support learning, collaboration, and autonomy are more likely to experience positive developmental outcomes.

In complement, EVT (Wigfield & Eccles, 2000) theorizes that individuals are more likely to engage in an activity when they perceive it as valuable and believe they can succeed in it. Applied to teacher PD, this suggests that educators' motivation is influenced not only by intrinsic interest but also by institutional reinforcement and expected utility, such as career advancement or enhanced teaching efficacy. Together, these frameworks offer a multilevel lens to understand PD participation, blending psychological agency with organizational dynamics.

Review of Related Literature

Personal Factors Influencing PD Participation

Teachers' individual attributes such as professional experience, academic qualification, motivation, age, and career aspirations significantly impact their likelihood of engaging in PD (Desimone, 2009; Guskey, 2002). Experienced teachers often seek leadership-oriented PD, while newer educators prioritize foundational instructional strategies (Kraft et al., 2021). Teachers with postgraduate qualifications also show higher participation rates, partly due to exposure to advanced training models (Oke, 2023). Motivation, whether intrinsic (e.g., a desire to improve student outcomes) or extrinsic (e.g., promotion) is a strong driver of PD engagement (Ryan & Deci, 2000). Highly committed teachers tend to participate in PD more actively, particularly when they perceive direct benefits to their classroom practice (Johnson & Adeola, 2024).

School-Level Determinants

Institutional structures play a pivotal role in either facilitating or inhibiting professional learning. Supportive school leadership, collegial collaboration, availability of learning resources, and alignment with governmental policy are all critical determinants (Leithwood et al., 2020). Schools that foster professional learning communities and allocate time for reflective practice report higher PD engagement (Vescio et al., 2008).

Conversely, underfunded institutions with rigid hierarchies and limited learning infrastructure tend to demotivate staff participation in PD (UNESCO, 2020). Leadership style is particularly important; transformational leaders who empower teachers and foster a growth-oriented culture often have more actively developing staff (Day & Sammons, 2016).

Methodology

Research Design:

This presents the result of the data analysis and the interpretations of the results were provided according to the research questions and hypotheses developed for this study. A quantitative, cross-sectional survey design was adopted for this study.

Sampling and Sampling Technique

Using multistage sampling, 15 public secondary schools in Ikorodu District 2 were selected, with proportional representation based on school size. The final sample comprised 285 teachers, yielding a 99% response rate.

Instrumentation

A structured questionnaire, validated through expert review and a pilot study, measured teachers' participation levels, perceived personal and institutional influences, and demographic details. The reliability coefficients exceeded 0.80 on all scales.

Data Analysis

Data were analyzed using SPSS v21. Descriptive statistics were employed to determine general trends, while ANOVA and regression analysis assessed the predictive strength of personal and school-level factors on PD participation.

Table 1 Socio-demographic characteristics of the respondents

Demographic Characteristics	Frequency (n=285)	Percentage (%)
Age		
20-29 years	60	21.1
30-39 years	75	26.3
40-49 years	96	33.7

50 and above	54	18.9
Gender		
Male	118	41.4
Female	167	58.6
Years of Teaching Experience		
0-5	72	25.3
6-10	103	36.1
11-15	75	26.3
16 and above	35	12.3
Class of Teaching Assignment		
JSS	109	38.2
SSS	176	61.8
Highest Educational Level		
NCE	56	19.6
Bachelors Degree	90	31.6
Masters Degree	76	26.7
Doctorate Degree	32	11.2
Others	31	10.9

The study surveyed 285 teachers, all of whom fully completed the questionnaire. The gender distribution revealed a female majority (58.6%) compared to males (41.4%). Most respondents were aged 40–49 years (33.7%), followed by those aged 30–39 (26.3%), 20–29 (21.1%), and 50+ (18.9%). In terms of teaching experience, the largest group had 6–10 years (36.1%), followed by 11–15 years (26.3%), 0–5 years (25.3%), and only 12.3% had 16+ years, indicating a smaller pool of highly experienced teachers. A majority of teachers (61.8%) work in Senior Secondary Schools (SSS), while 38.2% are in Junior Secondary Schools (JSS). Regarding qualifications, the most common was a Bachelor's Degree (31.6%), followed by Master's (26.7%), NCE (19.6%), Doctorate (11.2%), and Others (10.9%)—the latter likely comprising diplomas and professional certifications.

Results

Analysis According to Research Questions

The researcher used both descriptive and inferential statistical methods to analyze data and answer research questions regarding factors influencing teachers' participation in professional development programmes in public secondary schools. Specifically, the study focused on District 2 of Ikorodu LGA, Lagos State, Nigeria.

To address the first research objective assessing the level of professional development programmes the researcher collected data using a structured questionnaire. Key indicators examined included participation rate, learning application, institutional support, and perceived value of the programmes. Responses were categorized into five thematic areas: motivation/interest, learning application, career impact, administrative support, and actual

participation. These were quantified using a 4-point scale to reflect overall perceptions. These scores were then categorized into three engagement levels, as shown in Table 4.2 below:

Table 2: Participant's engagement score rank levels

<u>Scores</u>	<u>Level Rank</u>
≤ 2	Low level
2.01 – 3.00	Moderate level
3.01 – 4.00	High level

Figure 4.1: Level of engagement in professional development programmes.



Hence, for any given theme, a mean score of 2.00 or below indicates low engagement, scores between 2.01 and 3.00 reflect moderate engagement, while scores of 3.01 and above represent a high level of engagement in the programme.

To assess teachers' engagement in professional development programmes, responses were analyzed across five key themes: Perceived Career Impact, Institutional Support, Actual Participation, Motivation/Interest, and Application of Learning. The average scores on a 4-point scale ranged from 2.66 to 2.72, with an overall mean of 2.69 and a standard deviation of 1.06, indicating a moderate level of engagement. Perceived Career Impact scored the highest (2.72), showing that teachers value the career advancement opportunities these programmes offer. Institutional Support followed closely at 2.71, indicating that schools provide moderate support, though there's room for improvement. Actual Participation scored 2.68, reflecting consistent but moderate involvement in the programmes. Motivation/Interest and Application of Learning both had scores of 2.66, suggesting a moderate intrinsic interest in development and a possible gap in translating training into classroom practice. The findings reveal a moderate but uniform engagement level across all themes, pointing to general institutional encouragement but also emphasizing the need to enhance motivation and practical application of learning.

Research Question Two

To explore the personal factors influencing teachers' participation in professional development programmes, the study focused on two key themes: motivation for participation and commitment to the teaching profession. Participants' responses were measured using a 4-point Likert scale, and aggregated to assess how these individual-level factors impact their engagement. This approach enabled the researcher to quantify the influence of internal drivers such as personal interest and professional dedication on teachers' willingness to engage in continuous learning initiatives. These scores were then categorized into three levels of influence to determine the extent to which personal factors affect participation, as shown in Table 4.3 below:

Table 3: Participants' Influence Score Ranking

<u>Scores</u>	<u>Level Rank</u>
≤ 2	Low influence
2.01 – 3.00	Moderate influence
3.01 – 4.00	High influence

Figure 2: Personal factors that influences teachers' participation

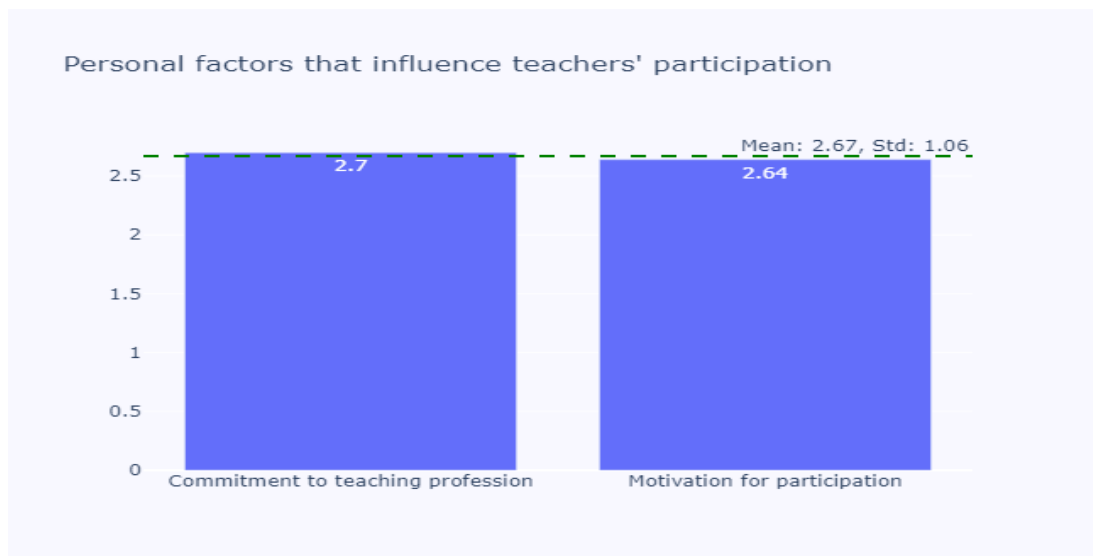


Figure 2 shows that personal factors namely, commitment to the teaching profession (mean = 2.70) and motivation for participation (mean = 2.64) exert a moderate influence on teachers' engagement in professional development programmes. The overall average score was 2.67 on a 4-point scale, indicating that while teachers show some degree of motivation and commitment; these are not strong drivers of participation. Although many teachers express interest in learning and career advancement, this motivation does not consistently lead to high participation. Commitment to the profession was slightly stronger, suggesting that a teacher's sense of identity and purpose contributes to engagement, though still moderately. The findings emphasize the need to strengthen internal drivers such as intrinsic motivation, passion for teaching, and belief in self-efficacy. Interventions that reinforce professional identity and align personal values with development goals may help boost sustained and deeper engagement in professional development activities.

Restatement of Research Objective and Question Three

To examine school-level factors influencing teachers' participation in professional development, responses were assessed across four themes: Collaborative Networks, Government Policies, Resource Allocation, and Leadership Support, using a 4-point Likert scale. Findings suggest that while teachers show interest in career growth, personal motivation alone does not ensure consistent participation. However, commitment to the profession though moderate shows a stronger influence. This underscores the importance of school-level enablers. The study suggests that enhancing institutional conditions, such as supportive leadership, effective policy implementation, sufficient resource provision, and opportunities for professional collaboration, is vital. Strengthening these external supports alongside internal motivators like professional identity and self-efficacy could significantly improve sustained teacher engagement in professional development activities. These scores were then categorized into three levels, as shown in Table 3 below:

Table 3 Participants' Influence Score Ranking

<u>Scores</u>	<u>Level Rank</u>
<= 2	Low influence
2.01 – 3.00	Moderate influence
3.01 – 4.00	High influence

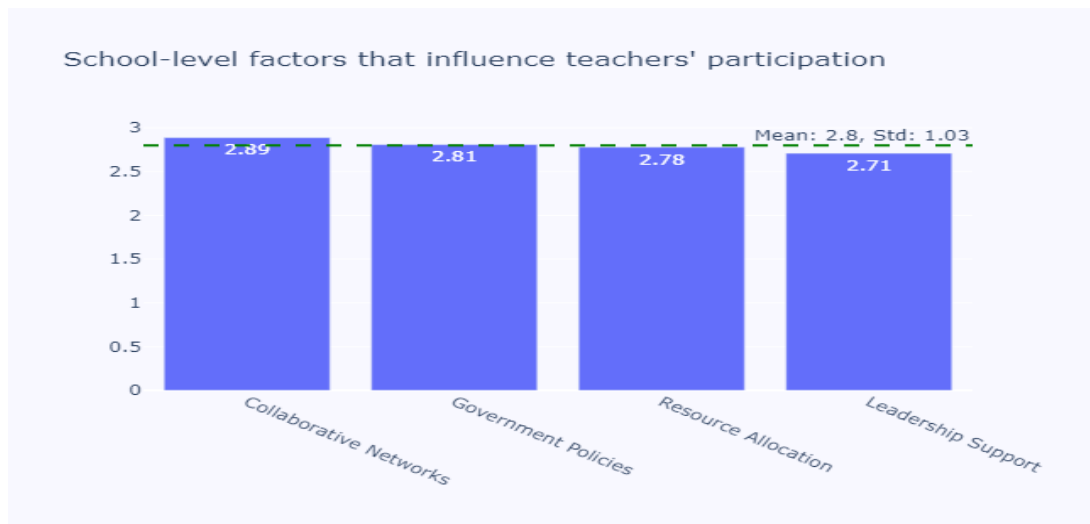


Figure 3: School-level factors that influences teachers' participation

The results in Figure 3 presents the average scores of school-level factors that influence teachers' participation in professional development programmes in public secondary schools. From the data, Collaborative Networks emerged as the most influential factor, with the highest average score of 2.89, suggesting that when teachers have opportunities to engage with peers through networks or professional learning communities, they are more likely to participate in development programmes. Such collaboration likely provides both motivation and a shared sense of purpose, reinforcing the value of continual learning within the teaching profession. Government Policies followed closely with a mean score of 2.81, indicating a significant influence. This reflects the role of formal structures and mandates in encouraging teacher participation. Clear policies that support and perhaps require professional development can act as strong enablers, especially when these policies are well-communicated and consistently implemented. Additionally, resource allocation (mean = 2.78) and leadership support (mean = 2.71) also play important roles, though they scored slightly below the overall mean value of 2.8. While the difference is modest, it suggests that limited access to financial, material, or time resources may hinder participation to some extent. Likewise, leadership support, while crucial, appears to be an area where improvements can be made. School leaders may not always provide the encouragement or structural backing needed to promote ongoing professional learning among teachers. The relatively narrow range of mean scores, combined with an overall standard deviation of 1.03, indicates that all four factors are moderately influential and interrelated. Hence, we can assume that none is negligible, however, collaborative networks and government policies stand out as slightly more impactful within the studied context. These imply that policy makers and school administrators seeking to improve teacher participation in professional development should prioritize fostering collaborative environments and ensuring that policy frameworks are supportive and enabling. Investments in resource provision and leadership training should also not be overlooked, as they form part of a holistic strategy to enhance teacher growth and, by extension, educational quality.

Test for hypothesis

In this section, we will explore the underlying relationships between critical variables such as personal factor, school-level factors, and participation in professional programs. Hypothesis testing provides us a framework for evaluating whether the observed patterns and differences in the data are statistically significant, or they occur by random chance. By employing robust statistical techniques such as multilinear regression analysis, this section aims to assess and validate theoretical assumptions, as well as provide empirical evidence to support or refute the postulated hypotheses.

Testing of Research Hypotheses

To evaluate these hypotheses, multiple linear regression analysis was employed. This statistical technique enables the assessment of the individual effects of the independent variables personal factors (PF) and school-level factors (SLF) on the dependent variable teachers' participation in professional development (TPDP).

Table 4.4 Influence of personal and school factors on teachers' participation in professional development programmes

	Coef (β)	Std err	t	P> t	[0.025	0.975]
const.	0.4596	0.171	2.681	0.008	0.122	0.797
Personal factors	0.1895	0.053	3.586	0.000	0.085	0.294
School factors	0.6155	0.068	9.070	0.000	0.482	0.749
$R^2 = 0.380$ $Adj-R^2 = 0.376$ F-statistics = 86.55 Sig = 0.000						

Dependent Variable: Teachers' participation

Table 4 presents the results of a multiple linear regression analysis conducted to evaluate the individual and combined influence of personal-level and school-level factors on teachers' participation in professional development programmes in public secondary schools in District 2 of Ikorodu Local Government Area.

The result reveals that the model is statistically significant overall, as indicated by the F-statistic (86.55, $p < 0.001$), showing that the combination of the predictors (personal and school factors) significantly explains the variability in teachers' participation. The result indicates that the model explains 38.0% of the variance in teachers' participation in professional development activities ($R^2 = 0.380$), suggesting a moderate level of explanatory power.

Hypothesis One (Ho1): Personal-level factors

The outcome shows that personal-level factors have a positive and statistically significant influence on teachers' participation ($\beta = 0.1895$, $t = 3.586$, $p < 0.001$). The 95% confidence interval [0.085, 0.294] does not include zero, further supports the significance of this effect. This finding implies that individual characteristics - such as motivation, or personal interest play an important role in shaping whether teachers engage in professional development. Therefore, Ho1 is rejected, confirming that personal factors do exert a meaningful influence on teachers' participation in professional development programmes.

Hypothesis Two (Ho2): School-level factors

The result further reveals that school-level factors have an even stronger and highly significant influence on participation ($\beta = 0.6155$, $t = 9.070$, $p < 0.001$). The confidence interval [0.482, 0.749] indicates a robust and substantial effect. This result suggests that institutional elements such as administrative support, collaboration opportunities, and resource allocation are powerful enablers of teacher engagement. As a result, Ho2 is also rejected.

Hypothesis Three (Ho3): Combined influence

The combined model shows that both personal and school-level factors significantly predict teacher participation, with school-level factors exerting a relatively greater influence. The significance of the overall model ($p < 0.001$) and the strength of both predictors indicate a meaningful joint impact on the dependent variable. Therefore, Ho3 is rejected, affirming that the combined influence of both sets of factors is statistically significant. Additionally, this regression analysis provides compelling evidence that both individual traits and institutional environments significantly influence teachers' engagement in professional development programmes. Most importantly, school-level factors appear to have a more substantial impact, highlighting the critical role of supportive school environments in fostering continuous professional growth. These findings have strong implications for education policy and school leadership, emphasizing the need to create enabling structures while also empowering teachers individually.

Findings

On average, teachers rated their PD participation as moderate ($M = 2.68$ on a 5-point scale). Engagement was highest in training related to teaching techniques, classroom management, and student assessment.

Career motivation, years of experience, and educational qualification emerged as significant personal predictors. Teachers pursuing postgraduate qualifications or with more than ten years' experience were more likely to engage in PD. Younger teachers, however, expressed challenges in accessing formal PD due to workload and lack of incentives.

School leadership support, policy alignment, and collaborative networks significantly influenced PD participation. Teachers in schools with proactive principals and strong collegial ties reported higher engagement. Regression analysis revealed that school-level variables accounted for more

variance ($R^2 = 0.62$) than personal-level factors ($R^2 = 0.21$), confirming their dominant predictive strength (Ajaegbu, 2025).

Discussion

The findings underscore that PD engagement is a product of both personal readiness and institutional context. While motivation and career aspirations are necessary, they are insufficient without enabling school environments. The strong predictive role of leadership and institutional support validates the OD framework's emphasis on systemic development (Cummings & Worley, 2014).

These results echo studies in similar contexts, such as Day and Sammons (2016), who found that sustained teacher growth occurs predominantly in schools with embedded PD cultures. The influence of collaboration also reinforces the value of learning communities in enhancing reflective practice and pedagogical adaptation.

Implications for Stakeholders

Leadership training should focus on developing instructional leaders who can foster a supportive and reflective school culture. Administrators must provide time, incentives, and platforms for peer learning. There is an urgent need to institutionalize PD by embedding it within educational reforms. This includes earmarked funding, nationwide standards for PD content, and teacher certification linked to continuous learning milestones. Teachers must take ownership of their professional growth by engaging in self-directed learning and forming informal networks of knowledge exchange. Encouragingly, digital PD opportunities offer new, flexible modes for engagement.

Recommendations

Establish School-Based PD Units by coordinate on-site workshops, mentoring, and peer review practices and expand Blended PD Models Incorporating both in-person and virtual learning modules to enhance accessibility.

Develop a PD Needs Assessment Framework tailoring training to career stages and school needs and provide incentives through promotions and certification renewals.

Institutionalize Monitoring Using longitudinal data to evaluate the effectiveness and relevance of PD initiatives.

Conclusion

Teachers are critical change agents in education, and their development must be prioritized through well-structured and context-sensitive professional learning systems. This study confirms that while personal attributes matter, institutional support mechanisms such as leadership, collaboration, and resources play a defining role in shaping PD engagement in Nigerian public

secondary schools. Sustainable improvement in teaching practice requires aligning teacher agency with supportive educational environments.

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