

PROFESSIONAL DEVELOPMENT PATHWAYS AND JOB PRODUCTIVITY DIFFERENTIALS BETWEEN URBAN-RURAL SENIOR SECONDARY SCHOOL ISLAMIC STUDIES TEACHERS JOB PRODUCTIVITY IN KWARA STATE

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Abstract

This study examined professional development (PD) pathways and job productivity differentials among urban and rural senior secondary school Islamic Studies teachers in Kwara State, Nigeria. Specifically, the study investigated teachers' participation in four PD pathways: in-service training, workshops and seminars, conferences, and certification or further education, and their relationship with four productivity indicators: instructional effectiveness, classroom management, professionalism, and student outcomes. Guided by Human Capital Theory, the study employed a descriptive survey design with correlational elements. A sample of 210 teachers and 150 principals was drawn through multistage and proportional procedures across the three senatorial districts. Data were collected using validated instruments (reliability coefficient = 0.81) and analysed using descriptive statistics, Pearson correlation, and multiple regression at the 0.05 significance level. Findings revealed that urban teachers participated more frequently in all PD pathways and demonstrated significantly higher productivity across all indicators compared to rural teachers. A significant moderate positive correlation ($r = .462, p < .001$) existed between PD participation and job productivity. PD pathways predicted job productivity more strongly among urban teachers ($R^2 = .36$) than rural teachers ($R^2 = .24$), with workshops and seminars emerging as the strongest predictors in both contexts. The study concludes that unequal access to professional development reinforces productivity gaps between urban and rural teachers. It recommends that the Kwara State Ministry of Education implement mobile PD units and satellite training centres for rural schools, establish location-sensitive PD policies with dedicated funding for rural teacher participation, and integrate targeted Islamic Studies PD programmes into state-level teacher development plans.

Keywords: Professional development, job productivity, Islamic Studies teachers, urban–rural differentials, human capital theory.

Introduction

Quality teaching remains the backbone of effective learning outcomes in Nigerian secondary schools, and the continuous professional development (PD) of teachers has been widely documented as a prerequisite for sustained instructional improvement. Across Nigeria, concerns persist regarding disparities in teacher competence, classroom practices, and student achievement, particularly between urban and rural school settings where resource gaps are substantial. Senior secondary school Islamic Studies teachers in Kwara State operate within this broader national context, where access to structured PD pathways, such as in-service training, workshops and seminars, conferences, and certification or further education remains uneven. Understanding how these pathways influence job productivity indicators, namely, instructional effectiveness, classroom management, professionalism, and student outcomes, within the urban-rural dichotomy is crucial for targeted educational reforms.

In-service training is one of the most frequently emphasised mechanisms for strengthening teacher productivity in Nigeria. Adeyemi (2021) found that systematic in-service training contributes significantly to teachers' performance appraisal outcomes and overall productivity, particularly by enhancing their instructional competencies. Akinyemi (2016) similarly observed that open and distance education platforms provide alternative PD opportunities for teachers, especially for rural educators who often lack access to conventional training. Amogechukwu (2023) further indicates that teachers perceive continuous retraining as instrumental in improving classroom management, professionalism, and pedagogical efficiency. Complementing these findings, Bala (2019) reported that workshops and seminars substantially enhance teachers' performance, linking such programmes to improved student outcomes in Yola Metropolis.

Conferences and seminars serve as vital professional development pathways that enhance Islamic Studies teachers' instructional quality by exposing them to current research, innovative pedagogical approaches, and emerging trends in religious education, while fostering professional networks that extend beyond the training event. National policy documents, particularly the Nigeria Annual Education Conference report (Federal Ministry of Education, 2016), underscore the critical importance of systematic PD initiatives in bridging systemic teacher quality gaps across states by standardising competencies and ensuring that teachers in underserved regions access the same quality improvement resources as their counterparts in better-resourced areas. Certification and further education constitute foundational PD pathways that establish and validate teachers' formal competencies through structured programmes like the Nigeria Certificate in Education, with the Teachers Registration Council of Nigeria (2019) setting comprehensive standards that ensure all practising teachers meet minimum competency requirements, while advanced degrees and specialised diplomas extend professional capabilities and directly translate to improved instructional effectiveness and student outcomes.

Okafor (2016) highlighted the relevance of restructuring certification programmes such as the Nigeria Certificate in Education (NCE), while Oladipo (2016) emphasised that teacher factors, including certification, significantly determine professional competence. Similarly, the Teachers Registration Council of Nigeria (TRCN, 2019) outlined standards for professional certification, establishing clear expectations for teacher development nationwide.

Empirical studies on teacher job productivity have consistently operationalised the construct through four measurable indicators: instructional effectiveness, classroom management, professionalism, and student outcomes. Regarding instructional effectiveness, Nwankwo (2021) specifically demonstrated that secondary school teachers in Anambra State who received regular supervisory guidance and participated in structured professional development programmes exhibited significantly improved lesson delivery, more effective use of instructional materials, and greater ability to adapt teaching methods to diverse learner needs. Similarly, Bello (2016) identified specific instructional strategies, including questioning techniques, differentiated instruction, and collaborative learning, as critical determinants of teaching effectiveness, finding that teachers who employed these strategies demonstrated measurably higher productivity in Oyo State secondary schools. These findings collectively establish instructional effectiveness as a primary parameter for assessing teacher productivity, with empirical evidence linking it directly to both professional support systems and pedagogical skill application.

Classroom management stands out as a key determinant of teaching success. Bayefa-Asaowei (2018) and Helen (2019) both argued that effective classroom management enhances teaching quality and learning outcomes, while Nwakwoala (2017) linked management practices directly to student academic performance. Professionalism is another essential element of teacher productivity. Standards set by TRCN (2017) and further elaborated by the National Teachers' Institute (2018) define professionalism in teaching as a collection of behaviours, skills, ethical practices, and qualifications. Olatunji (2021) extends the discussion by connecting teacher professionalism to national development, underlining its broader societal role.

Student outcomes remain the ultimate measure of teacher productivity. Research by Musa (2016), Okoro (2016), and Adewale (2020) affirms that effective teaching methods, teachers' qualifications, and competence significantly influence academic achievement. Within the specific context of Islamic Studies, recent evidence from Kwara North further demonstrates a strong relationship between teacher qualifications and student performance (Al-Hikmah University, 2022).

This study adopts **Human Capital Theory** as its guiding framework, which posits that investment in individuals' knowledge and skills yields measurable returns in productivity. Professional development pathways-such as in-service training, workshops, conferences, and certification-serve as human capital investments that enhance teachers' competencies. The conceptual framework, therefore, links PD pathways (independent variables) to job productivity indicators (dependent variables), with the urban-rural context in which teachers operate moderating the relationship. Resource disparities, infrastructural access, and the availability of training opportunities form the contextual layer shaping productivity outcomes.

Notwithstanding the well-documented positive relationship between professional development and teacher productivity (Adeyemi, 2021; Bala, 2019; Yusuf, 2022), significant disparities persist in access to and impact of PD opportunities between urban and rural secondary schools in Kwara State, Nigeria. Rural-based Islamic Studies teachers encounter systemic barriers including geographical isolation from training centres, limited availability of subject-specific PD programmes, infrequent instructional supervision, and inadequate professional support infrastructure (Akinyemi, 2016; Amogechukwu, 2023), whereas their urban counterparts benefit from greater proximity to resources, regular access to diverse training modalities, and stronger institutional backing (Federal Ministry of Education, 2016). These structural inequities potentially manifest as differential outcomes across validated productivity indicators, instructional delivery quality, classroom management efficacy, professional conduct, and student academic achievement (Nwankwo, 2021; Bello, 2016; Bayefa-Asaowei, 2018), thereby reinforcing existing educational inequalities between locales. Nevertheless, empirical investigations that systematically examine how discrete PD pathways (in-service training, workshops and seminars, conferences, and certification) differentially predict these productivity dimensions among Islamic Studies teachers within the urban-rural continuum remain conspicuously scarce. The extant literature predominantly addresses teacher development in aggregate terms, frequently conflating subject areas and geographical contexts without disaggregating findings to reveal discipline-specific or location-specific patterns (Okafor, 2016; Oladipo, 2016; TRCN, 2019). This methodological lacuna leaves educational stakeholders without the granular, contextually-grounded evidence necessary to formulate targeted interventions addressing the unique professional requirements of Islamic Studies teachers in underserved rural communities (Yahya, 2022). The present study addresses this gap by investigating the professional development pathways accessible to Islamic Studies teachers and examining their differential influence on job productivity across urban and rural senior secondary schools in Kwara State.

Purpose of the Study

The primary purpose of this study is to investigate professional development pathways and job productivity differentials between urban and rural senior secondary school Islamic Studies teachers in Kwara State, Nigeria. Specifically, the study aims to:

1. Examine the extent of Islamic Studies teachers' engagement in four professional development pathways, in-service training, workshops and seminars, conferences, and certification or further education, across urban and rural senior secondary schools in Kwara State.
2. Assess the levels of job productivity among urban and rural Islamic Studies teachers in Kwara State across four indicators: instructional effectiveness, classroom management, professionalism, and student outcomes.
3. Determine the nature and strength of the relationship between professional development pathways and job productivity indicators among Islamic Studies teachers in Kwara State.
4. Ascertain whether significant differences exist in the predictive strength of professional development programmes on job productivity between urban and rural Islamic Studies teachers in Kwara State.

Research Questions

Based on the purpose of the study, the following research questions are formulated to guide this investigation:

1. What is the extent of Islamic Studies teachers' engagement in professional development pathways (in-service training, workshops and seminars, conferences, and certification or further education) in urban and rural senior secondary schools in Kwara State?
2. What are the levels of job productivity (instructional effectiveness, classroom management, professionalism, and student outcomes) among urban and rural Islamic Studies teachers in Kwara State?

Research Hypotheses

The following null hypotheses are tested in this study at 0.05 level of significance:

H₀₁: There is no significant relationship between professional development pathways (in-service training, workshops and seminars, conferences, and certification or further education) and job productivity indicators (instructional effectiveness, classroom management, professionalism, and student outcomes) among Islamic Studies teachers in Kwara State.

H₀₂: There is no significant difference in the predictive strength of professional development programmes on job productivity between urban and rural Islamic Studies teachers in Kwara State.

Methodology

The study employed a descriptive survey design with correlational elements to examine professional development (PD) pathways among Islamic Studies teachers and their influence on job productivity in urban and rural senior secondary schools in Kwara State. The design enabled the collection of quantitative data from a large population and the examination of relationships between PD engagement and productivity indicators.

The study was conducted in Kwara State, Nigeria, which comprises three senatorial districts: Kwara Central, Kwara North, and Kwara South. Kwara State is situated in the North-Central geopolitical zone of Nigeria and has a mix of urban and rural settlements with diverse educational infrastructure and resource distribution.

The target population of this study comprised all 443 senior secondary school Islamic Studies teachers and all 238 principals in Kwara State. The total population was 681 respondents. This population was drawn from public senior secondary schools across the three senatorial districts of Kwara State.

The study sample consisted of 210 Islamic Studies teachers and 150 principals, yielding a total of 360 respondents. A multistage sampling procedure was employed to select the sample.

In the first stage, stratification by senatorial districts was conducted. The three senatorial districts in Kwara State, Kwara Central, Kwara North, and Kwara South, served as natural strata. This stratification ensured representation from all geographical zones of the state.

In the second stage, classification into urban and rural locations was performed. Kwara Central senatorial district was classified as urban based on several

justifications. First, it contains the state capital, Ilorin, which is the most urbanised city in Kwara State. Second, it has a higher concentration of social amenities, including educational infrastructure, electricity, pipe-borne water, and healthcare facilities. Third, it hosts the highest number of tertiary institutions and training centres. Fourth, it has better road networks and accessibility to professional development venues. Fifth, the National Population Commission classification criteria for urban areas (population density exceeding 20,000 and presence of modern amenities) apply to most local government areas in Kwara Central. Conversely, Kwara North and Kwara South were designated as rural because they are predominantly agrarian with dispersed settlements, have limited educational infrastructure and fewer training facilities, experience geographical isolation from the state capital, have poorer road networks and transportation challenges, and most communities fall below the population density threshold for urban classification.

In the third stage, proportional sampling was used to determine the number of teachers and principals from each senatorial district based on the population size. The formula for proportional allocation was $n_h = (N_h/N) \times n$, where n_h represents the sample size for each stratum, N_h represents the population size of each stratum, N represents the total population, and n represents the desired sample size. For teachers, with a total population of 443 and a desired sample of 210, the distribution was as follows: Kwara Central (urban) had a population of 187 teachers, yielding a sample of 89 teachers; Kwara North (rural) had a population of 126 teachers, yielding a sample of 60 teachers; and Kwara South (rural) had a population of 130 teachers, yielding a sample of 61 teachers. For principals, with a total population of 238 and a desired sample of 150, the distribution was: Kwara Central (urban) had a population of 98 principals, yielding a sample of 62 principals; Kwara North (rural) had a population of 68 principals, yielding a sample of 43 principals; and Kwara South (rural) had a population of 72 principals, yielding a sample of 45 principals.

In the fourth stage, purposive sampling was employed for the qualitative component. From the quantitative sample, 18 teachers (6 from each senatorial district, comprising 3 male and 3 female) and 9 principals (3 from each senatorial district) were purposively selected for semi-structured interviews based on their years of experience (minimum 5 years), willingness to participate, and ability to provide rich information on the phenomenon under study.

In the fifth stage, simple random sampling was applied. Within each stratum, simple random sampling using the balloting technique was used to select the actual teachers and principals who participated in the quantitative survey.

Three instruments were used for data collection in this study. The first instrument was the Islamic Studies Teachers Professional Development Pathways Questionnaire (ISPDPO). This researcher-designed instrument consisted of 25 items divided into two sections. Section A captured demographic information of respondents with 6 items. Section B contained 19 items measuring teachers' engagement in four professional development pathways: in-service training (5 items), workshops and seminars (5 items), educational conferences (4 items), and certification or further education (5 items). Items were structured on a 4-point Likert scale with response options of Very High Extent (4), High Extent (3), Low Extent (2), and Very Low Extent (1).

The second instrument was the Islamic Studies Teachers Job Productivity Questionnaire (ISTJQP). This instrument was designed to measure principals' ratings of teachers' job productivity across four indicators. It contained 24 items distributed as follows: instructional effectiveness (7 items), classroom management (6 items), professionalism (5 items), and student outcomes (6 items). Principals rated each teacher on a 4-point scale with options of Excellent (4), Good (3), Fair (2), and Poor (1).

The third instrument was a Semi-Structured Interview Guide. This instrument contained 12 open-ended questions exploring teachers' and principals' experiences with professional development, barriers to participation, contextual factors influencing productivity, and suggestions for improving PD access. Probes were included to elicit detailed responses. The instruments were subjected to face and content validation by three experts, comprising two from Educational Management and one from Tests and Measurement at the University of Ilorin. The experts assessed the instruments for clarity of language, appropriateness of items to research questions, adequacy of coverage, and relevance to the study objectives. Their suggestions and modifications were incorporated into the final versions of the instruments.

The quantitative instruments were pilot-tested on 30 teachers and 20 principals from neighbouring Osun State, which shares similar characteristics with Kwara State but was not part of the main study. Data collected were analysed using Cronbach's alpha reliability coefficient. The ISPDQP yielded a reliability coefficient of 0.83, while the ISTJQP yielded 0.79. The overall reliability coefficient for the quantitative instruments was 0.81, indicating high internal consistency. For the qualitative component, trustworthiness was established through member checking, peer debriefing, and triangulation of sources.

The researchers visited each selected school personally to administer the questionnaires. Permission was sought from school principals, and consent was obtained from all participants. The purpose of the study was explained, and confidentiality of responses was assured. Questionnaires were distributed and retrieved within two weeks. For the qualitative interviews, appointments were scheduled with participants at their convenience, and interviews were conducted in private settings, audio-recorded with permission, and later transcribed verbatim.

Data were analysed using SPSS version 23. Descriptive statistics of mean and standard deviation were used to answer research questions 1 and 2. Mean scores were interpreted using the following benchmark: 1.00 to 1.49 represented Very Low; 1.50 to 2.49 represented Low; 2.50 to 3.49 represented High; and 3.50 to 4.00 represented Very High. For research question 1, mean scores were calculated for each PD pathway and overall PD engagement across locations. For research question 2, mean scores were computed for each productivity indicator and overall productivity across locations.

Pearson Product Moment Correlation (PPMC) was used to test hypothesis 1 at 0.05 level of significance. PPMC was appropriate for determining the nature, whether positive or negative, and strength, whether weak, moderate, or strong, of the relationship between professional development pathways, as the independent

variable, and job productivity, as the dependent variable, both measured as continuous variables.

Multiple regression analysis was used to test hypothesis 2 at 0.05 level of significance. Multiple regression was appropriate because it determines the combined predictive power of the four PD pathways, as multiple independent variables, on job productivity, as the dependent variable. It provides the coefficient of determination (R²) indicating the proportion of variance in productivity explained by PD pathways. It allows comparison of predictive strength between urban and rural subsamples through separate regression analyses. It also identifies the relative contribution, through beta weights, of each PD pathway to predicting productivity.

Results

Research Question One: What is the extent of Islamic Studies teachers' engagement in professional development pathways (in-service training, workshops and seminars, conferences, and certification or further education) in urban and rural senior secondary schools in Kwara State?

Table 1

Level of Professional Development Programmes by Location (N = 185)

PD Category	Urban Mean	SD	Rural Mean	SD	Interpretation
In-Service Training	2.35	0.78	1.98	0.81	Urban = Moderate; Rural = Low
Workshops & Seminars	2.89	0.82	2.41	0.87	Urban = Moderate; Rural = Moderate
Educational Conferences	1.98	0.75	1.62	0.69	Urban = Low; Rural = Low
Certification & Further Education	1.87	0.70	1.48	0.64	Urban = Low; Rural = Low
Overall PD Level	2.27	0.76	1.87	0.75	Urban = Moderate; Rural = Low-Moderate

Urban teachers engaged more in all forms of professional development. Workshops and seminars recorded the highest participation for both groups, while certification/further education and conferences remained the least accessible PD pathways, particularly for rural teachers.

Research Question Two: What are the levels of job productivity (instructional effectiveness, classroom management, professionalism, and student outcomes) among urban and rural Islamic Studies teachers in Kwara State?

Table 2

Job Productivity Levels by Location (N = 132 Principals' Ratings)

Productivity Indicator	Urban Mean	SD	Rural Mean	SD	Interpretation
Instructional Effectiveness	2.38	0.79	1.98	0.78	Urban = Moderate; Rural = Low–Moderate
Classroom Management	3.12	0.83	2.53	0.79	Urban = High; Rural = Moderate
Professionalism & Development	2.89	0.84	2.41	0.80	Urban = Moderate; Rural = Moderate
Student Outcomes	3.67	0.76	3.21	0.81	Urban = High; Rural = High
Overall Productivity	3.02	0.81	2.51	0.82	Urban = High–Moderate; Rural = Moderate

Urban teachers demonstrated **higher productivity** in all areas. The strongest indicators for both groups were student outcomes and classroom management. Instructional effectiveness was the weakest indicator for both groups but especially for rural teachers.

Hypothesis Testing

Hypothesis One: *There is no significant relationship between professional development programmes and job productivity among Islamic Studies teachers.*

Table 3

Correlation between Professional Development and Job Productivity (N = 132)

Variables Compared	r (Correlation Coefficient)	df	p-value	Strength of Relationship	Direction	Decision	Interpretation
PD Programmes ↔ Job Productivity	.462	130	.001	Moderate	Positive	Reject H ₀₁	Greater participation in PD is moderately associated with higher job productivity ratings.

A moderate positive correlation (.462) indicates that as teachers engage more in PD programmes, their productivity (instructional effectiveness, classroom management, professionalism, student outcomes) tends to increase. The relationship is statistically significant (p < .001), meaning the result is unlikely due to chance.

Hypothesis Two: *There is no significant difference in the predictive strength of professional development programmes on job productivity between urban and rural teachers.*

Table 4: Predictive Strength of Professional Development on Job Productivity

Location	F-Statistic (df)	p-value	Strongest Predictors (β weights)	Predictive Power	Interpretation
Urban (n = 95)	F(4,90) = 18.42	.36	Workshops/Seminars (.38), In-Service Training (.33)	Stronger	PD explains 36% of variance in productivity; workshops and in-service training are the most influential.
Rural (n = 55)	F(4,50) = 7.91	.24	Workshops/Seminars (.27), Conferences (.22)	Moderate	PD explains 24% of variance in productivity; workshops and conferences are the strongest predictors.

Decision: H_{02} is rejected. Professional development predicts job productivity more strongly among **urban teachers** than rural teachers.

R^2 shows the proportion of variance in job productivity explained by PD pathways. Urban teachers’ productivity is more strongly predicted by PD (36%) compared to rural teachers (24%). Workshops/Seminars consistently emerge as the strongest predictor across both contexts, but rural teachers rely more on conferences than certification/further education. The models are statistically significant ($p < .001$), confirming that PD pathways meaningfully predict productivity.

Discussion

The purpose of this study was to examine professional development programmes and job productivity differentials among urban and rural senior secondary school Islamic Studies teachers in Kwara State, Nigeria. The findings provide meaningful insight into how disparities in access to professional development shape teacher performance across different geographical contexts, with implications for educational policy and practice. Overall, the results reveal substantial urban–rural gaps in both professional development engagement and job productivity, confirming long-standing concerns about educational inequality in Nigeria while extending the discourse to the specific context of Islamic Studies instruction.

The first major finding revealed that Islamic Studies teachers in urban schools engage more frequently in all four professional development pathways, in-service training, workshops and seminars, conferences, and certification or further education, compared to their rural counterparts. Urban teachers recorded an overall professional development mean of 2.27, interpreted as moderate, while rural teachers recorded 1.87, interpreted as low to moderate. Workshops and seminars recorded the highest participation for both groups, suggesting that these represent the most accessible form of professional development regardless of location. However, certification or further education and conferences remained the least accessible pathways, particularly for rural teachers who recorded means of 1.48 and 1.62, respectively, both interpreted as low. This finding aligns strongly with previous studies, such as Akinyemi (2016), who noted that rural teachers in Nigeria often experience limited access to professional development due to infrastructural deficits, distance from training centres, and

inadequate supervisory support. Similarly, Amogechukwu (2023) documented that teachers in rural Enugu State faced significant barriers to accessing continuous training programmes, resulting in lower participation rates compared to their urban counterparts. The lower engagement of rural teachers in conferences and certification-based training specifically reflects structural constraints documented in national reports (Federal Ministry of Education, 2016; Teachers Registration Council of Nigeria, 2019), which highlight that professional development opportunities are disproportionately concentrated in urban centres where training facilities, resource persons, and institutional support are more readily available. The overall professional development means further reinforce this disparity, indicating that even at the aggregate level, teachers' participation in professional development activities within Kwara State remains only moderate, with rural teachers particularly disadvantaged. This finding suggests that policies and programmes aimed at equitable professional development delivery, including those articulated in national education policy frameworks, are yet to produce uniform access across locations, leaving rural Islamic Studies teachers systematically under-supported in their professional growth.

The second major finding revealed that job productivity was consistently higher among urban teachers across all four measured indicators. Urban teachers recorded an overall productivity mean of 3.02, interpreted as high to moderate, compared to rural teachers' mean of 2.51, interpreted as moderate. Specifically, urban teachers scored higher on instructional effectiveness (urban mean = 2.38; rural mean = 1.98), classroom management (urban mean = 3.12; rural mean = 2.53), professionalism (urban mean = 2.89; rural mean = 2.41), and student outcomes (urban mean = 3.67; rural mean = 3.21). The strongest indicators for both groups were student outcomes and classroom management, suggesting that regardless of location, Islamic Studies teachers demonstrate competence in maintaining classroom order and facilitating student learning. However, instructional effectiveness emerged as the weakest indicator for both groups, particularly among rural teachers whose mean of 1.98 fell within the low to moderate range. This pattern mirrors earlier research by Bello (2016), who identified instructional strategies as critical determinants of teaching effectiveness and found that teachers in well-resourced urban schools demonstrated superior instructional delivery compared to those in rural areas. Similarly, Nwakwoala (2017) established that classroom management practices significantly influenced student academic performance, with urban teachers exhibiting more effective management techniques due to better access to training and resources. Bayefa-Asawei (2018) further argued that effective teaching and classroom management serve as tools for quality education, demonstrating that teachers with access to professional development opportunities exhibit stronger instructional skills and improved classroom control. The weaker instructional effectiveness observed among rural teachers may be directly connected to their lower participation in training programmes that target pedagogical competencies, echoing findings by Adeyemi (2021) on the instructional value of structured in-service training. Adeyemi (2021) specifically demonstrated that systematic in-service training contributes significantly to teachers' performance appraisal outcomes and overall productivity by enhancing their instructional competencies, yet rural teachers' limited access to such training perpetuates their disadvantage in this critical productivity dimension.

The third key finding relates to the significant positive correlation between professional development pathways and job productivity indicators. The Pearson correlation analysis revealed a moderate positive relationship ($r = .462$, $p < .001$) between professional development participation and job productivity, indicating that as teachers engage more in professional development programmes, their productivity across instructional effectiveness, classroom management, professionalism, and student outcomes tends to increase. This statistically significant finding supports the proposition of Human Capital Theory, which formed the study's theoretical anchor. According to the theory, as articulated by Schultz (1961) and Becker (1964), investment in the knowledge and skills of workers yields measurable returns in productivity. In the context of teaching, professional development pathways represent human capital investments that enhance teachers' competencies, which subsequently translate into improved job performance.

The moderate but significant correlation obtained in this study demonstrates that when Islamic Studies teachers participate in professional development programmes, they are more likely to exhibit professional behaviours, adopt effective instructional strategies, maintain orderly classrooms, and produce better student outcomes. These results corroborate evidence from Bala (2019), who reported that staff development programmes substantially enhanced teachers' performance in secondary schools in Yola Metropolis, linking such programmes to improved instructional delivery and student achievement. Eziamaka (2020) similarly established strong links between professional development initiatives and various dimensions of teacher job performance, finding that teachers who participated regularly in training demonstrated greater commitment, innovation, and effectiveness. Nwankwo (2021) further reinforced these findings by demonstrating that supervisory support and structured professional development significantly improved teachers' instructional effectiveness in Anambra State. The consistency of these findings across different Nigerian contexts strengthens the evidence base for professional development as a critical determinant of teacher productivity and validates the continued investment in teacher training programmes.

The regression findings further deepened understanding of the professional development-productivity nexus by revealing differential predictive effects across locations. Professional development programmes had a stronger predictive effect on job productivity among urban teachers ($R^2 = .36$) than among rural teachers ($R^2 = .24$). This means that professional development pathways explained 36% of the variance in job productivity for urban teachers but only 24% for rural teachers, indicating that professional development is a more powerful predictor of productivity in urban contexts. The regression models were statistically significant for both locations ($p < .001$), confirming that professional development pathways meaningfully predict job productivity regardless of location, but the strength of prediction differs substantially. For urban teachers, workshops and seminars ($\beta = .38$) and in-service training ($\beta = .33$) emerged as the strongest predictors, suggesting that these pathways are particularly influential in shaping urban teachers' productivity. For rural teachers, workshops and seminars ($\beta = .27$) and conferences ($\beta = .22$) were the strongest predictors, indicating that rural teachers who manage to access conferences derive significant productivity benefits from such participation. This differential predictive strength may stem from variations in the quality, depth, and consistency of exposure to professional

development activities across locations. Urban teachers benefit from proximity to training centres, higher availability of information and communication technology facilities, regular access to resource persons, and greater institutional support from school administrators and supervisory agencies. These factors enhance the applicability and transformative potential of professional development, enabling urban teachers to translate training into improved classroom practice more effectively. Conversely, rural teachers, even when they participate in professional development programmes, may attend fewer comprehensive sessions, experience interruptions due to logistical challenges, or lack post-training support and follow-up, all of which reduce the effectiveness of professional development in transforming practice. These findings resonate with national concerns about unequal teacher support systems across Nigerian school locations, as highlighted by the National Teachers' Institute (2018), which documented significant disparities in access to quality professional development between urban and rural areas and called for targeted interventions to address these imbalances.

Overall, the study's findings portray a reinforcing cycle of advantage and disadvantage across locations. Teachers in urban areas access more professional development opportunities, and because they access more professional development, their productivity is higher across all measured indicators. Conversely, rural teachers have lower professional development access and consequently demonstrate lower productivity, particularly in instructional effectiveness. This cycle widens the urban-rural education gap and contributes to persistent disparities in learning outcomes across Kwara State. The findings have important theoretical implications, extending Human Capital Theory by demonstrating that the returns on human capital investment in teachers are not uniform across contexts but are mediated by geographical location and the associated support systems. The theory must therefore account for contextual factors that moderate the relationship between investment and productivity outcomes. Breaking this cycle requires systemic interventions that decentralize professional development delivery, improve rural school funding, establish mobile training units and satellite centres, leverage technology for remote learning, and create location-sensitive professional support structures that address the unique challenges faced by rural teachers. Without such targeted interventions, the professional development and productivity gaps documented in this study are likely to persist, with negative consequences for educational quality and equity in Kwara State and similar contexts across Nigeria.

Conclusion

This study examined professional development pathways and job productivity differentials among urban and rural senior secondary school Islamic Studies teachers in Kwara State, Nigeria. The findings reveal significant urban-rural disparities in both professional development access and job productivity. Urban teachers demonstrated consistently higher engagement across all four professional development pathways, in-service training, workshops and seminars, conferences, and certification or further education, and correspondingly higher productivity across instructional effectiveness, classroom management, professionalism, and student outcomes. A significant positive correlation ($r = .462$, $p < .001$) was established between professional development participation and job productivity, validating the theoretical proposition that investment in human capital enhances performance. However, professional

development predicted job productivity more strongly among urban teachers ($R^2 = .36$) than rural teachers ($R^2 = .24$), indicating that the quality and transformative potential of professional development experiences differ substantially across locations. The study concludes that unequal access to professional development reinforces productivity gaps, creating a self-perpetuating cycle of advantage for urban teachers and disadvantage for their rural counterparts. These findings extend Human Capital Theory by demonstrating that contextual factors, particularly geographical location and institutional support systems, moderate the relationship between professional development investment and productivity outcomes. Addressing these disparities requires systemic, location-sensitive interventions that decentralise professional development delivery, improve rural school infrastructure, and create targeted support structures for underserved rural teachers.

Recommendations

Based on the findings and conclusions of this study, the following five recommendations are proposed:

- 1.** The Kwara State Ministry of Education, in collaboration with the Teachers Registration Council of Nigeria, should establish mobile professional development units equipped with training resources and facilitators to reach rural schools. These units should conduct regular workshops, seminars, and in-service training sessions in rural communities, eliminating the barrier of geographical distance that currently limits rural teachers' participation in professional development programmes.
- 2.** The Kwara State Government should develop and implement professional development policies that explicitly address rural-urban disparities. These policies should include quota systems ensuring minimum participation of rural teachers in all professional development programmes, provision of transport and accommodation allowances for rural teachers attending training, and preferential selection of rural teachers for advanced certification and further education opportunities.
- 3.** The Federal Ministry of Education and National Teachers' Institute should leverage information and communication technology to deliver professional development through online platforms, radio broadcasts, and mobile learning applications. This would enable rural teachers to access training remotely, participate in virtual conferences, and engage with professional learning communities without the need for physical travel to urban centres, thereby circumventing infrastructural barriers.
- 4.** Kwara State Government and international development partners should allocate dedicated funds specifically for rural teacher professional development. These funds should support school-based training programmes, provide stipends for rural teachers pursuing further education, incentivise qualified trainers to conduct on-site programmes in rural schools, and subsidise transportation and accommodation costs for rural teachers attending mandatory training in urban centres.
- 5.** The Kwara State Ministry of Education should integrate targeted professional development for Islamic Studies teachers into state-level teacher development plans, recognising the subject's unique role in moral and religious education. This should include subject-specific workshops, curriculum review sessions, pedagogical training tailored to Islamic Studies instruction, and the development of locally relevant teaching resources that address the contextual challenges faced by Islamic Studies teachers in rural communities.

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