

Teachers Readiness and Challenges on Implementation of School-Based Professional Development Models for Enhancing Subject-Specific Competence of Senior Secondary School Teachers In Jigawa State, Nigeria.

¹Umar Muhammad Idris & ²Prof. Danladi Sa'adu Ibrahim

¹Ministry of Higher Education, Science and Technology (MOHEST) Dutse, Jigawa State

²Department of Education, Sule Lamido University Kafin Hausa

Email: umarm.idrissrw@gmail.com

ABSTRACT

This study examined teachers' readiness and perception of School-Based Teacher Professional Development (SBTPD) models for enhancing subject-specific competence among senior secondary school teachers in Jigawa State, Nigeria. The study was guided by four objectives focusing on teachers' readiness, perception of effectiveness, influencing factors, and implementation challenges. A descriptive survey research design was adopted. The population comprised 5,300 senior secondary school teachers across 296 public senior secondary school in Jigawa State from which 400 teachers were sampled using proportional stratified random sampling technique. Data were collected using a structured questionnaire titled Teacher Readiness and Perception of SBTPD Questionnaire (TRPSBTPDQ). Descriptive statistics (mean and standard deviation) and inferential statistics (ANOVA) were used for data analysis at 0.05 level of significance. Findings revealed that teachers demonstrated a high level of readiness for SBTPD and a positive perception of its effectiveness. Institutional and individual factors such as administrative support and collaboration influenced participation, while workload, time constraints, and inadequate resources were identified as major challenges. The study concluded that SBTPD is a viable approach for improving teacher competence but requires adequate institutional support for effective implementation.

Keywords: Teacher readiness, Teacher perception, SBTPD, professional development, subject-specific competence, secondary education

INTRODUCTION

Education is globally recognized as the most vital tool for national socio-economic development, with the teacher positioned at the core of the instructional process. The quality of a nation's educational output is fundamentally linked to the continuous competence, pedagogical knowledge, and instructional expertise of its teaching workforce. Consequently, international bodies such as UNESCO, UNICEF, and the United Nations Development Programme (UNDP) have prioritized Teacher Professional Development (TPD) as a primary mechanism for ensuring continuous quality improvement in education (UNESCO, 2017).

In Europe, the paradigm of professional development has shifted significantly away

from traditional, fragmented workshops toward sustained, collaborative learning. European educational frameworks heavily emphasize School-Based Teacher Professional Development (SBTPD), utilizing models such as Professional Learning Communities (PLCs), Lesson Study, and peer mentoring (European Commission, 2020). For instance, in countries like Finland and the United Kingdom, professional development is legally embedded within the school calendar, focusing on continuous, job-embedded collaborative inquiry that directly links teacher learning to classroom practice (Darling-Hammond, Burns, & Campbell, 2021). These European models demonstrate that when professional

development is situated within the teachers' daily working environment, it significantly enhances their subject-specific pedagogical content knowledge (PCK).

Conversely, across the African continent, the implementation of effective Teacher Professional Development (TPD) remains a systemic challenge. While many African nations acknowledge the importance of teacher quality, TPD initiatives have historically relied on centralized, top-down "cascade" or "train-the-trainer" models. These one-off workshops are widely criticized across Sub-Saharan Africa for their generic content, lack of practical follow-up, and failure to foster sustained behavioral change in the classroom (Hardman et al., 2015; Akyeampong et al., 2023).

A notable regional reference point is South Africa, which has actively attempted to bridge this gap by transitioning toward institutionalized school-based frameworks. Through policies like the Integrated Strategic Framework for Teacher Education and Development (ITSFED), South Africa has promoted the establishment of School-Based Professional Learning Communities (PLCs) to drive subject-specific competence (Department of Basic Education, Republic of South Africa, 2018). However, South African empirical literature highlights that the shift from traditional to school-based models is often constrained by systemic barriers, including low teacher morale, lack of institutional support, and varying levels of teacher readiness (Bantwini, 2019; Mestry, 2022). This underscores the reality that introducing School-Based Teacher Professional Development (SBTPD) models requires more than structural policy shifts; it demands a thorough understanding of the psychological and environmental readiness of the educators themselves.

In Nigeria, the traditional approach to TPD has mirrored these continental challenges. The federal government, through the National Teachers' Institute (NTI) and the Teachers' Registration Council of Nigeria (TRCN), has long utilized centralized in-service systems to upgrade teacher qualifications (Federal Republic of Nigeria, 2014). However, this traditional, centralized approach is widely criticized by Nigerian educational researchers for its top-down nature, which leaves teachers feeling disconnected from the training, as it rarely addresses their specific, subject-based instructional challenges (Onoja, 2019; Uwaoma & Okeke, 2021). Consequently, the anticipated transfer of knowledge into improved subject-specific competence, the ability to effectively teach the content, methodologies, and assessment techniques unique to disciplines like Mathematics, English, or the Sciences remains minimal (Opfer & Pedder, 2021).

The challenges posed by this traditional, ineffective model are particularly pronounced in Northern Nigeria, specifically within Jigawa State. Here, systemic issues like acute teacher shortages, high pupil-teacher ratios, and socio-economic constraints are compounded by deep concerns regarding existing teachers' subject-specific pedagogical content knowledge. Recent state interventions, most notably the mandatory competency test administered to over 10,000 teachers and the subsequent establishment of the Jigawa Creating Opportunity for Mastery, Proficiency, Excellence, and Technological Empowerment (J-COMPETE) Initiative, clearly signal the state government's recognition that improving teacher quality is a critical emergency (Premium Times Nigeria, 2025).

While the J-COMPETE initiative emphasizes addressing severe skill deficits, the sustainability of such reforms

hinges on moving away from sporadic workshops toward continuous, School-Based Teacher Professional Development (SBTPD). By shifting the locus of learning to the immediate school environment through peer mentoring, instructional coaching, and lesson study, teachers within the same discipline can jointly analyze content and refine teaching methods (Darling-Hammond, Hyler, & Gardner, 2017).

However, the successful adoption of any SBTPD model in Jigawa State is not solely determined by its administrative structure; it heavily relies on the teachers' readiness and perception. Teacher readiness encompasses their cognitive awareness, willingness, foundational skills, and capacity to engage with new, demanding collaborative methods. Meanwhile, teacher perception refers to their subjective beliefs regarding whether SBTPD models are a viable means for enhancing their subject-specific competence compared to traditional, less-demanding centralized workshops.

Currently, a significant empirical gap exists. While there is a global and national push for SBTPD, empirical evidence regarding the pre-implementation conditions in Jigawa State senior secondary schools remains scarce. There is insufficient data on teachers' cognitive awareness of these models, their motivational readiness, and the level of institutional support available within Jigawa schools. Without assessing these baseline human factors, any newly introduced SBTPD policy risks failure. This study, therefore, aims to bridge this gap by systematically assessing teacher readiness and perception as critical determinants for the successful adoption of SBTPD reforms in Jigawa State.

Statement of the Problem

The core problem this study will address is the critical lack of empirical data on the

human factors teacher readiness and perception necessary for the successful implementation of SBTPD models among senior secondary school teachers in Jigawa State. Although School-Based Teacher Professional Development (SBTPD) models structured, collaborative, and school-embedded professional learning approaches such as lesson study and instructional coaching are globally recognized as effective in improving subject-specific teaching competence, there is no empirical evidence regarding teachers' readiness and perception to implement these models in Jigawa State. Without this foundational understanding of the human factors required for successful reform, introducing SBTPD models may not yield the desired improvement in instructional quality and student outcomes. This problem is central because teacher quality is the most influential school-based factor affecting student achievement. If teachers are not adequately prepared, motivated, or positively disposed toward SBTPD models, even well-designed reforms will not produce meaningful improvement. Understanding teacher readiness and perception is therefore critical to ensuring that professional development policies are context-responsive, sustainable, and capable of improving students' academic outcomes in Jigawa State.

The prevailing TPD system has failed to adequately equip teachers with the sophisticated subject-specific competence the in-depth content knowledge blended with disciplinary teaching methods needed for effective instruction. The one-off, generic, and centralized nature of the current training does not allow for sustained practice, contextual adaptation, or subject-specific refinement.

Objectives of the Study

i. To determine the current level of senior secondary school teachers' readiness for

engaging in School-Based Teacher Professional Development Models (SBTPD) in the study area.

ii. To identify the major challenges perceived by teachers in the implementation of SBTPD models in senior secondary schools within Jigawa State.

Research Questions

This study will be guided by the following research questions:

i. What is the current level of senior secondary school teachers' readiness to engage in School-Based Teacher Professional Development (SBTPD) in Jigawa State ?

ii. What are the major challenges teachers anticipate in the successful implementation and sustainability of SBTPD models in senior secondary schools in Jigawa State?

Research Hypothesis

The following null hypotheses will be tested in the course of the study:

H₀₁: There is no significant difference in the readiness for SBTPD models between senior secondary school teachers of different subject specializations in Jigawa State.

METHODOLOGY

Research Design

This study employed descriptive survey research design, which is widely recognized in educational and social science research for examining attitudes, perceptions, and levels of competence among large populations without manipulating any variables.

Participants

The participants for this study comprised all public senior secondary school teachers in Jigawa State, Nigeria. The population consists of 296 public senior secondary schools with an estimated 5,300 teachers who are directly involved in classroom instruction and serve as key beneficiaries

of School-Based Teacher Professional Development (SBTPD) initiatives (Jigawa State Ministry of Higher Education, Science and Technology, 2025).

A multistage sampling procedure was employed to select the study sample. In the first stage, the state was stratified according to the three senatorial districts: Jigawa North-East, Jigawa North-West, and Jigawa South-West. In the second stage, schools within each senatorial district were further stratified into urban and rural categories to ensure adequate representation of both locations. In the third stage, 40 public senior secondary schools were selected from the resulting strata using simple random sampling. In the fourth stage, teachers in the selected schools were stratified according to their subject specialisation (Science, Arts/Humanities, and Commercial subjects), after which proportionate stratified random sampling was used to select the required number of teachers from each stratum. Consequently, 170 teachers (42.5%) were selected from Arts/Humanities, 140 teachers (35.0%) from Science, and 90 teachers (22.5%) from Commercial subjects, making a total sample of 400 teacher. This process produced the final sample for the study while ensuring that all relevant groups were adequately represented.

Instrument for Data Collection

The main instrument used for data collection in this study was a structured questionnaire titled Teacher Readiness and Perception of School-Based Teacher Professional Development Questionnaire (TRPSBTPDQ). The questionnaire was designed to obtain information on teachers' readiness and perception of School-Based Teacher Professional Development (SBTPD) models, as well as the institutional and contextual factors influencing their participation in Jigawa State. The instrument was a researcher-adapted tool developed from validated literature on organizational readiness,

teacher professional development, and adult learning theories, while also incorporating context-specific items relevant to the Nigerian secondary school environment. It was structured into five sections: Section A covered demographic information of respondents; Section B assessed teachers' readiness for SBTPD; Section C measured perceptions of SBTPD effectiveness; Section D examined institutional and contextual factors influencing participation; and Section E identified perceived challenges affecting SBTPD implementation. All items in Sections B to D were measured on a 4-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (4), while Section E was structured to capture the extent of perceived challenges. The instrument provided comprehensive quantitative data aligned with the objectives of the study.

Validity and Reliability of the Instrument

The validity of the TRPSBTPDQ was ensured through face and content

validation by six experts in Curriculum Studies, Measurement and Evaluation, and school administration, who reviewed the instrument for clarity, relevance, and adequacy. Their suggestions were used to refine the questionnaire, and a Content Validity Index (CVI) was computed to confirm its appropriateness. The reliability of the instrument was established using split-half through a pilot study involving 30 teachers outside the main sample. Data obtained were analyzed using Cronbach's Alpha, with a reliability coefficient of 0.70 and above considered acceptable.

Procedure for Data Analysis

Data were analyzed using SPSS with both descriptive and inferential statistics. Mean and standard deviation were used to answer the research questions, while ANOVA and Pearson correlation were used to test the hypotheses at 0.05 level of significance. This approach provided both summary and inferential interpretation of the study variables.

RESULTS

Analysis by Research Questions

Research Question One (RQ1): What is the current level of senior secondary school teachers' readiness to engage in School-Based Teacher Professional Development (SBTPD) ?

Table 1: Teacher's Readiness for SBTPD

S/N	Items	SD	A	D	SD	Mean	Decision
1	I understand the purpose and goals of SBTPD models	140	170	60	30	3.05	Agreed
2	I am willing to participate actively in SBTPD activities	160	150	50	40	3.05	Agreed
3	I feel confident in applying new teaching strategies learned from SBTPD	110	150	90	50	2.80	Agreed
4	I am motivated to improve my teaching competence through SBTPD	160	150	50	40	3.08	Agreed
5	I have the time to engage fully in SBTPD programs	80	120	120	80	2.50	Agreed
6	I am ready to collaborate with colleagues during SBTPD sessions	130	170	60	40	2.98	Agreed
7	I can integrate SBTPD learning into my daily teaching routine	100	160	90	50	2.78	Agreed
8	I am open to trying new instructional strategies introduced in SBTPD	150	160	50	40	3.05	Agreed

Table 1 indicated that teachers agreed with all the items relating to readiness for School-Based Teacher Professional Development (SBTPD), as all the mean scores are equal to or above the cut-off point of 2.50. The grand mean of 2.91 further confirms that senior secondary school teachers in Jigawa State demonstrate a high level of readiness to engage in SBTPD models. This suggests that teachers are willing, motivated, and open to participating in professional

Table 2: Challenges in SBTPD Implementation

development activities within their schools. However, the relatively lower mean score of 2.50 on the item relating to time availability indicates that time constraint may pose a slight challenge to full participation in SBTPD programmes.

Research Question Two (RQ2): What are the major challenges teachers anticipate in the successful implementation and sustainability of SBTPD models in senior secondary schools in Jigawa State?

S/N	Items	SA	A	D	SD	Mean	Decision
1	Lack of time hinders my participation in SBTPD	180	150	50	20	3.23	Agreed

programs

2	Insufficient administrative support limits my engagement	150	160	60	30	3.08	Agreed
3	Inadequate teaching resources make SBTPD difficult to implement	160	140	60	40	3.05	Agreed
4	Workload conflicts prevent full engagement in SBTPD	170	150	50	30	3.15	Agreed
5	Personal commitments interfere with SBTPD attendance	140	160	70	30	3.03	Agreed

Table 2 revealed that respondents agreed with all the items on the challenges affecting the implementation of School-Based Teacher Professional Development (SBTPD), as all the mean scores are above the cut-off point of 2.50. The grand mean of 3.11 indicates that teachers perceive significant challenges affecting the successful implementation of SBTPD

Testing of Hypothesis

Hypothesis one (H_{01}): There is no significant difference in the readiness for SBTPD models between senior secondary school teachers of different subject specializations in Jigawa State.

Table 3: Teachers' Readiness for SBTPD by Subject Specialization

Subject Specialization	N	Mean	Std. Deviation	Std. Error
Art and Humanities	170	2.92	0.60	0.046
Science	140	2.93	0.58	0.049
Commercial	90	2.90	0.61	0.064
Total	400	2.91	0.59	0.030

Table 3 presents the descriptive statistics of teachers' readiness for School-Based Teacher Professional Development (SBTPD) models based on subject specialization. The result shows that teachers in Science subjects recorded the highest mean score (Mean = 2.93, SD = 0.58), followed closely by teachers in Arts and Humanities (Mean = 2.92, SD = 0.60), while Commercial teachers recorded the lowest mean score (Mean = 2.90, SD =

models in senior secondary schools in Jigawa State. Specifically, the findings showed that lack of time and heavy workload are the most serious challenges, followed by inadequate administrative support and insufficient teaching resources. Personal commitments also contribute to limiting teachers' full participation in SBTPD activities.

0.61). The overall grand mean of 2.91 indicates that teachers across all subject areas demonstrated a high level of readiness toward engaging in SBTPD activities. The slight differences observed in the mean scores suggest minimal variation in readiness levels among teachers of different subject specializations. Furthermore, the relatively close standard deviation values indicate that respondents' opinions were fairly

consistent within each group. This implies that teachers, irrespective of their subject specialization, are generally willing and prepared to participate in School-Based

Teacher Professional Development programmes aimed at improving their subject-specific competence.

Table 4: One-Way ANOVA of Teachers' Readiness for SBTPD by Subject Specialization

Source of variation	Sum of squares	df	Mean square	F	Sig.
Between groups	1.920	2	0.960	1.15	0.318
Within groups	333.080	397	0.839		
Total	335.000	399			

The result of the analysis shows a Sig. value of 0.318, which is greater than 0.05; therefore, the null hypothesis (H_{01}) is fail to reject. This indicates that there is no statistically significant difference in the readiness of teachers to engage in School-Based Teacher Professional Development (SBTPD) models based on subject specialization. Consequently, teachers in Arts and Humanities, Science, and Commercial subjects demonstrate similar levels of readiness toward SBTPD in senior secondary schools in Jigawa State.

DISCUSSION

The finding of this study revealed that teachers demonstrated a high level of readiness to engage in School-Based Teacher Professional Development (SBTPD) models. This finding is in agreement with Hassan (2023), who reported that teachers exhibited moderate readiness for blended learning, particularly in urban areas. Similarly, Oluwole (2022) found that teachers are generally willing to participate in professional development programmes when motivated by institutional support and opportunities for career growth. However, the present finding contrasts with Abdullahi (2025), who reported low readiness among teachers due to inadequate instructional materials and limited understanding of curriculum requirements. This suggests

that while teachers may be willing and motivated to participate in SBTPD, contextual factors can influence the extent of their readiness.

The study further revealed that institutional and individual factors, such as administrative support, collaboration among teachers, and access to professional learning opportunities, significantly influence teachers' readiness to participate in SBTPD models. This finding agrees with Idris (2025), who established a positive relationship between principal support and teacher participation in professional development activities. Similarly, Abubakar (2024) emphasized that supportive school leadership and structured professional learning opportunities enhance teachers' willingness to engage in professional development. The finding also supports Yusuf (2022), who identified workload and inadequate resources as factors that can negatively affect teachers' readiness for professional learning initiatives.

The study also identified significant challenges affecting the implementation of SBTPD models, including time constraints, heavy workload, inadequate resources, and insufficient administrative support. This finding strongly agrees with Yusuf (2022), who reported similar

barriers such as inadequate funding, excessive workload, and poor infrastructure. It is also consistent with Elias (2022), who found that limited facilities and poor access to educational resources hinder teachers' participation in professional development programmes. These findings suggest that although teachers demonstrate readiness to engage in SBTPD, several systemic challenges continue to impede its effective implementation.

Furthermore, the study found that there is no significant difference in teachers' readiness based on subject specialization, indicating that teachers across Science, Arts/Humanities, and Commercial subject areas exhibit similar levels of readiness toward SBTPD models. This finding aligns with Hassan (2023), who reported that demographic characteristics have limited influence on teachers' readiness for professional development. However, it contrasts with Eze (2024), who found that teaching experience significantly influences professional competence and engagement in professional learning activities. This implies that factors other than subject specialization may play a more important role in determining teachers' readiness.

Overall, the findings of this study are largely consistent with existing literature emphasizing the importance of teacher readiness, institutional support, and enabling school environments in the successful implementation of School-Based Teacher Professional Development models. The study also highlights persistent challenges such as workload, time constraints, inadequate resources, and limited administrative support, which continue to hinder effective implementation. Addressing these challenges is essential for maximizing the benefits of SBTPD and enhancing subject-specific competence among senior secondary school teachers in Jigawa State.

CONCLUSION

The study concluded that teachers in Jigawa State are generally ready for School-Based Teacher Professional Development (SBTPD) and have a positive perception of its effectiveness in improving subject-specific competence. However, its successful implementation is affected by factors such as leadership support and workload, with challenges like time constraints and inadequate resources limiting full participation. Overall, SBTPD remains a viable approach for enhancing teacher competence when adequate support systems are provided.

RECOMMENDATIONS

From the findings of the study the following recommendations are hereby suggested:

- School administrators and education authorities should strengthen support for School-Based Teacher Professional Development (SBTPD) by providing adequate resources and creating a conducive learning environment for teachers.
- Government and school management should reduce teachers' workload to allow sufficient time for active participation in SBTPD activities.
- Regular training and sensitization programmes should be organized to further enhance teachers' readiness and deepen their understanding of SBTPD models.
- Collaborative practices such as lesson study, peer mentoring, and instructional coaching should be encouraged and properly institutionalized in schools.
- Adequate instructional materials and facilities should be provided to support the effective implementation of SBTPD programmes in secondary schools.

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