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Demand, Supply and Utilization of Teachers in Primary Schools in Southwest, Nigeria

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ABSTRACT

This study investigated the demand, supply, and utilization of teachers in public primary schools across Southwest Nigeria. The purpose of the study was to assess the alignment between teacher needs and availability amid rising enrollment and educational reforms. Three Southwest states, namely Ondo, Ekiti, and Osun, were chosen as a representative sample with data obtained from 2018 to 2023. An ex-post facto and descriptive survey design was employed, utilizing secondary data on pupil enrollment and teacher supply sourced from the State Universal Basic Education Boards (SUBEBs) and Ministry of Education of the sampled states. Data were analyzed using frequency counts, ratios, percentages, and trend analysis to determine demand (based on a 1:15 ratio), supply levels, and teacher-pupil ratios. Findings revealed significant disparities. Ondo State exhibited the highest demand (40,995 teachers) and a severe supply shortage (7,237), yielding a 1:85 ratio. Ekiti showed a demand of 9,408 with 7,679 supplied, averaging a 1:18 ratio, while Osun required 12,324 teachers but supplied 7,368, resulting in a 1:25 ratio with fluctuations. These ratios exceed the national 1:35 standard, indicating widespread understaffing, particularly in Ondo, where high ratios suggest overutilization of teachers and overcrowded classrooms. Ekiti's lower ratio reflects better resource use, while Osun's variability points to inconsistent staffing. The study highlights a regional failure to meet teacher demand, compromising educational quality and Universal Basic Education goals. Recommendations include increased recruitment in Ondo, stabilized supply in Osun, and sustained efforts in Ekiti, alongside improved data accuracy and higher education funding. These findings underscore the need for strategic interventions to balance teacher supply with demand, ensuring effective utilization and equitable education across Southwest Nigeria's primary schools. . Future research could explore funding impacts or rural-urban staffing divides to refine solutions, making this a foundational step toward addressing Nigeria's primary education crisis.

Keywords: Teacher Demand, Teacher Supply, Teacher Utilization, Teacher-Pupil Ratio, Southwest Nigeria, Primary Education, Educational Reform

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1. INTRODUCTION

The fundamental purpose of education in any society is to enhance the human condition, fostering knowledge, skills, and new behaviors that enable individuals to adapt to and thrive within their communities (Yakubova, 2024). In Nigeria, education is regarded as a powerful tool for driving rapid and desirable changes, contributing to the development of the nation's economic, political, social, and human resources (Adu et al., 2024). The goal of elementary education in Nigeria is to provide children with free access to schooling, exposing them to positive learning experiences that equip them to earn a livelihood. It seeks to impart foundational skills in reading, writing, and mathematics during the first six years of education. These skills empower children to lead meaningful lives and contribute to societal progress by the end of their schooling (Federal Government of Nigeria [FGN], 2004).

This conviction underpins the National Policy on Education and the various initiatives implemented to support it. Primary education forms a critical foundation in Nigeria's educational system, shaping the trajectory of subsequent learning stages. Afolabi (2005) asserts that primary education is the cornerstone determining the success or failure of later educational phases, necessitating a competent and well-equipped teaching workforce. Similarly, Onuorah (2007) emphasizes the pivotal role of teachers, noting that they largely influence the quality of outcomes any educational system can deliver to society's growth and development. It is likely due to education's contributions to the socio-political and economic advancement of the populace that Nigerians place significant value on this stage of schooling.

Demand as a fundamental concept in economics, is typically defined as the quantity of goods desired at a specific price within a given timeframe. Lévy-Garboua and Montmarquette (2011) propose that demand reflects people's willingness to purchase particular items, with the price of goods being the most critical factor shaping consumer decisions. The demand for a product strengthens when its price is lower than that of comparable alternatives, establishing an inverse relationship between price and quantity demanded. However, applying this to the demand for teachers is complex. Olusegun and Adedeji (2022) argue that the demand for teachers cannot be easily or precisely defined in the same way as demand for other labor types in production systems. Instead, the demand for teachers in education hinges on multiple factors. Gerald and Hussar (1998) identify key determinants, including the number of teachers exiting the system who need replacement, fluctuations in student enrollment necessitating additional or fewer teachers, and the subjects included in the school curriculum. Adu and Ajayi (2023) note that both student and teacher enrollment exhibit fluctuating trends, with growth rates showing both positive and negative shifts. Additionally, the supply side specifically, the availability of qualified instructors plays a vital role in driving teacher demand.

Under typical conditions, these factors remain relatively stable, but two notable exceptions disrupt this balance: mortality rates, particularly among young female teachers, which vary significantly by local government area, and large-scale family migration from rural to urban and metropolitan centers (Federal Ministry of Education, 2003a). In Southwest States, this migration is a prominent factor, as rural populations move to urban areas seeking modern social services. Other elements influencing teacher demand include class size, teaching loads, and required instructional time for students.

Less commonly used measures to assess teacher need include the curriculum and educational program structure, the age at which compulsory education ends, and academic standards tied to graduation requirements (Onwu & Sehoole, 2015). Teacher demand in this study means the number of teachers needed and affordable to effectively man the numerous primary schools in Southwest States, ensuring quality educational services for children. Conversely, teacher supply refers to the number of available instructors who are employed and actively delivering excellent and efficient educational services to students (Chukwu, 2010). Any meaningful discussion of teacher supply must address the distinction between qualified and unqualified teachers.

The Situation Assessment and Analysis (SAA, 2001) identified teacher supply as a critical educational input—alongside school infrastructure, educational materials and equipment, curriculum, and pedagogical methods—that directly impacts school access and educational quality. SAA argued that among all factors contributing to education, none is arguably more essential than the teacher. In elementary schools, factors influencing teacher demand include the student-teacher ratio, the number of learning areas or subjects in the curriculum, and teachers' areas of specialization. Most of these elements are regulated by ministries of education through the State Universal Primary Education Board (SUBEB) (Adeyemi, 2006).

An adequate supply of instructors is fundamental to meeting teacher demand. Afolabi (2000) defined supply as the quantity of a commodity a supplier is willing to offer for sale at a specific time and price. This concept frames supply as the total amount of goods available at a given price and moment. An increase in a product's price typically boosts its supply, signaling a decrease in demand due to the higher cost. Conversely, a reduction in supply often raises prices due to scarcity, decreasing the quantity demanded. Kayode (2011) likened this to teachers, suggesting that their "prices"—salaries and wages (the cost of labor)—are determined similarly to goods. However, because teacher training requires significant time, market forces (the interplay of demand and supply) struggle to quickly address instructor supply shortages.

Teachers, as a vital labor force, provide their services (teaching) to develop a nation's human resources, contributing to its social, political, and economic growth. Falodun (1997) described the labor market as a system where employers and potential workers connect closely to hire and offer labor services for productive purposes. In economics, the dynamics of demand and supply in the labor market shape wage or income levels. The equilibrium point, where supply and demand balance with no excess demand or supply, is a key concept. In education, the labor market for teachers is the educational or school system itself.

Afolabi (2004) described the supply of teachers as the number of qualified individuals willing to take up teaching positions at a specific time and salary rate. He argued that the higher the compensation offered by employers, the more eager teachers are to provide their services. Dike (2002) viewed teacher supply as encompassing both the quality and quantity of teachers available to fill vacancies and the strategies to retain them once hired. Factors affecting teacher supply, particularly in technical and vocational fields, include a shortage of teachers from producing institutions, low wages, inadequate incentives, shifts in educational policies, and neglect of the colleges of education system (Agabi, 1999).

Kerre (1999) suggested that teacher supply is shaped by curriculum policy, teacher education policy, gender, and the social and economic conditions influencing young people's study and career choices. Additional dimensions include labor market challenges and teacher training. High-quality education demands top-tier teachers, and research consistently shows that a skilled, professional teaching force significantly impacts outcomes. Teachers bear the critical responsibility of imparting knowledge and skills to young learners.

To meet the expectations of 21st-century Nigerians, the government must review and revise the teacher education curriculum at primary and other educational levels. There is an urgent need to enhance the practical skills of instructors in reading, writing, mathematics, science, information technology, and vocational education. Nigeria currently faces a complex and professionally demanding environment for teachers, largely due to the revolution in information and communication technology, for which most instructors remain inadequately prepared. Achieving the goals of Universal Basic Education (UBE) hinges on a high-quality teaching workforce.

Given the rising student enrollment, a key concern is whether the supply of subject-specific teachers meets the demand in primary schools in Southwest States, Nigeria. Given the state's prominent role in Nigeria's educational development, one might assume an adequate supply of qualified teachers exists today. However, prior research indicates that many primary schools in Southwest States still urgently need qualified instructors. This underscores the need to examine the pupil-teacher ratio as a foundation for balancing teacher supply and demand in the region.

Statement of the Problem

The rapid increase in primary schools across all areas of Southwest States of Nigeria including the most remote communities stems from some state governments' efforts to ensure education is accessible to everyone. Nigeria's policy of affordable, free, and compulsory education up to Junior Secondary School 3, implemented by some state governments, has likely driven a surge in student enrollment, heightening the demand for qualified teachers, particularly in primary schools. Despite various state initiatives to increase the supply of instructors, prior studies have consistently found that the availability of skilled teachers falls short of the need (Kayode, 2011; Iyiomo and Ishola, 2018; Okodua and Onye, 2022; Olatunji, 2024; Oyekunle; 2024). Moreover, there is an uneven distribution of teachers across local government areas, cities, and villages within the state (Ogunode, 2021; Nduudee & Shedrack, 2024; Okumbiri & Igwesi, 2025). It is in the light of this that an investigation is necessary on the supply of and demand for teachers in primary schools in Southwest States of Nigeria.

Objectives of the Study

The primary objective of this study is to analyze the demand and supply of teachers in public primary schools in Southwest Nigeria. Specifically, the study aims to:

1. Analyze the trends in teachers' demand and pupils' enrollment in public primary schools in Southwest Nigeria.
2. Determine the growth rates of teachers' and pupils' enrollment in public primary schools in Southwest Nigeria.
3. Ascertain the teacher-pupil ratio in public primary schools in Southwest Nigeria.
4. Investigate the relationship between teacher demand and supply in public primary schools in Southwest Nigeria.

The study's findings are significant as they analyze trends in teachers' demand and pupils' enrollment in public primary schools in Southwest Nigeria over the study period (2018–2023). The growth rates of teachers' and pupils' enrollment were determined, and the teacher-pupil ratio was established. Additionally, the relationship between teacher demand and supply was identified. Beyond these insights, the study informs policy implementation by aiding policymakers, government authorities, and stakeholders in regulating teacher production. It ensures teachers are available in sufficient quantity and quality, preventing shortages or surpluses. The research clarifies the student-teacher ratio composition and its relationship with demand and supply, supporting evidence-based policy decisions. Furthermore, this study serves as a foundation for future researchers exploring similar topics in Southwest Nigeria, providing a valuable reference point. By addressing teacher allocation challenges, the findings contribute to improving educational quality and resource management in the region's public primary schools.

Research Questions

Three research questions were raised to guide the study

1. What is the level of teacher demand in public primary schools in Southwest Nigeria?
2. What is the level of teacher supply in primary schools in Southwest Nigeria?
3. What is the level of pupils' enrollment in primary schools in Southwest Nigeria?

2. LITERATURE REVIEW

Demand for Teachers

The demand for teachers refers to the number of educators needed to occupy teaching position within a specific academic session and institution. In Nigeria, this demand remains a persistent challenge, shaped by factors including student enrollment, teacher distribution, government policies, and wider socioeconomic shifts. Dike (2002) argued that the Federal Government attributes the declining quality of education, particularly at the primary level, to a severe shortage of qualified teachers. This deficit undermines the successful execution of educational reforms and contributes to the broader decay of the education system.

Dike (2002) emphasized that the scarcity of trained educators, especially in rural schools, often results in children being taught by unqualified or inadequately prepared instructors, with enduring consequences for educational quality and children's ability to gain essential developmental skills. Recent findings by Enyiazu (2022) reveal that over 5,000 qualified lecturers emigrate from Nigeria annually due to brain drain, compounded by a 2021 education budget of just 5.6%—well below UNESCO's recommended 26%—which restricts funds for teacher recruitment. Enyiazu (2022) also noted that poor working conditions, such as insufficient materials and low salaries, erode teacher commitment. Samuel et al. (2023) further argue that irregular pay and a lack of incentives intensify shortages by diminishing teacher motivation.

Akinduro (2003) observed that many Nigerian students fortunate enough to attend school are frequently taught by inadequately trained educators. Often labeled "half-baked," these teachers lack the essential qualifications and skills to deliver quality education. Akinduro's research suggests that this widespread reliance on unqualified instructors traps the education system in a cycle of underachievement, jeopardizing the objectives of initiatives like the Universal Basic Education (UBE) program.

The Federal Ministry of Education (FME, 2003) reinforced this argument with data revealing a substantial shortfall in the number of teachers needed to serve Nigeria's growing student population. Ogunode (2021) further noted that only 20% of primary teachers possess minimum skills, and just 1 in 10 are proficient in primary-level English, a deficiency that undermines UBE goals. The FME (2003) report stressed the urgent need for action to address this teacher shortage if UBE objectives were to be realized. Echoing these concerns, Adeyemi (2008) highlighted that teacher demand remains a persistent challenge in Nigerian secondary schools. As the population expands and educational reforms take effect, the number of students requiring accommodation rises accordingly. This demand for teachers, especially at the secondary level, recurs annually in Nigeria, with schools grappling to secure sufficient qualified staff to meet the needs of an ever-growing student body.

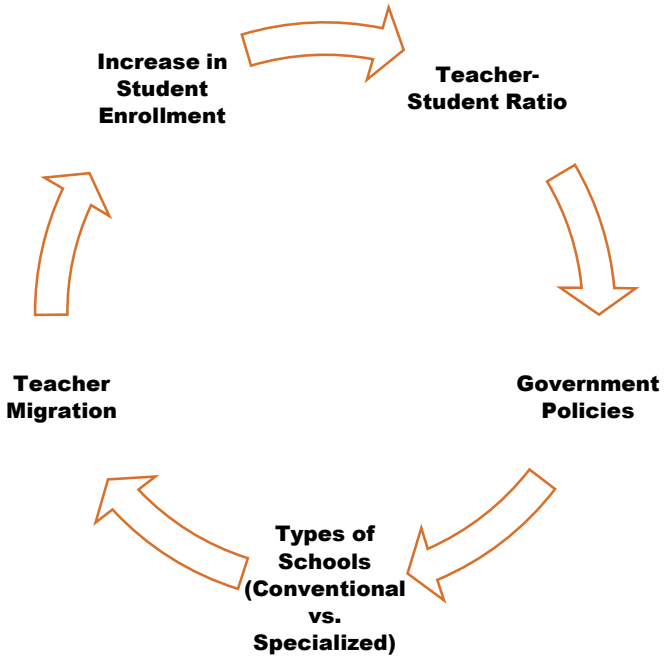

Figure 1: Factors Influencing Teacher Demand in Nigeria

Factors Affecting the Demand for Teachers

The demand for teachers is shaped by a variety of interconnected factors that have been studied extensively in educational research. Adeyemi (2011) identified several major determinants of teacher demand, with the increase in student enrolment standing out as one of the most significant. As more children enroll in school, especially in the wake of policies like the UBE, the need for teachers rises accordingly (Ogunode, 2021, citing UNESCO, 2018, and Tijani, 2018). A growing student population puts pressure on the available teaching staff, often resulting in overcrowded classrooms and a decreased quality of education. In a study to assess the attrition rate of teachers in primary and junior secondary schools under the Ebonyi State Universal Basic Education program, Nweke et al. (2024) found that while attrition rates in Ebonyi State are low, the overall shortage of qualified teachers leads to overcrowded classrooms, diminished individual attention, and a decline in educational outcomes, with specific recommendations for improved teacher welfare like regular salaries and professional development.

This demand is further exacerbated by the increasing emphasis on quality education, which calls for smaller class sizes and more personalized attention for students (Nduudee and Shedrack, 2024). Bolaji and Onikoyi (2024) research also pointed to the importance of factors such as the student-teacher ratio, class size, and the number of periods per week, all of which influence the demand for teaching staff in Nigerian schools.

Samuel et al. (2024) added another layer of complexity to the demand for teachers by suggesting that shifts in the types of schools students attend can affect teacher demand. For example, the migration of students from conventional secondary schools to specialized schools or newly established institutions creates additional pressure on the supply of qualified teachers. This migration leads to an increased need for educators who are specialized in certain subjects or educational approaches, adding to the overall demand for teaching staff. They argued that the existence of educational reforms and changes in student preferences generate a heightened demand for teachers, even in situations where the supply of teachers may appear to be sufficient on paper.

Another significant factor influencing teacher demand is the retirement and migration of educators. Adegoroye and Oyetola (2024) observed that the retirement of teachers, coupled with the movement of skilled educators from rural areas to urban centers or even abroad, exacerbates teacher shortages, particularly in remote areas. The emigration of Nigerian teachers to countries with better working conditions and higher salaries further depletes the teacher workforce. This migration phenomenon has been documented by several studies emphasizing the need for policies that address teacher retention, particularly in rural and underserved regions (Ahmad and Qamar, 2018; Shittu and Olubor, 2021; Okunlola and Hendricks, 2022; Samuel, 2023; Egara and Mosia, 2024). These factors highlight the critical role of both national policies and local government actions in balancing the supply and demand of teachers.

Moreover, government policies related to educational funding and reforms play a crucial role in shaping teacher demand. Enyiazu (2022) emphasized that changes in educational policy, such as the introduction of new curricula, the expansion of school networks, or the implementation of national education programs like the UBE, all contribute to fluctuations in teacher demand. A policy shift that calls for greater access to education or the establishment of new educational institutions will inevitably create an increased demand for teachers (Ahmed et al., 2022).

The student-teacher ratio also remains a critical factor. A study by Anakwue (2021) found that regions with lower student-teacher ratios tend to have better educational outcomes, as teachers are able to provide more individualized attention to students. In a similar study, Ogunode (2021) details pupil-teacher ratios (PTR) exceeding recommended levels, with North West at 132:1 compared to South West at 34:1, and ratios over 40:1 considered a measure of poor quality education. However, the study revealed that as student enrolment increases, maintaining a low ratio becomes a significant challenge, requiring the recruitment of additional teachers to ensure that each student receives adequate support.

Supply of Teachers

The supply of teachers, which refers to the number of qualified educators available to fill teaching positions, is another critical component in the teacher demand-supply equation. Emeka et al. (2021) discussed the concept of supply in economic terms, explaining that supply is the quantity of goods (or services) that producers are willing to offer at a given price. In the context of education, the "price" can be seen as factors such as salaries, benefits, and working conditions. However, teacher supply is not solely determined by these economic incentives. Several studies, highlighted that the supply of teachers is heavily influenced by the availability of quality teacher training programs, the attractiveness of the profession, and the retention of existing teachers within the education system (Kayode, 2011; Iyiomo and Ishola, 2018; Okodua and Onye, 2022; Olatunji, 2024; Oyekunle; 2024)

Emeka et al. (2021) further elaborated on the issue of teacher supply by noting that the number of teachers entering the profession is not always aligned with the demand for teachers. He pointed out that while there may be a sufficient number of teachers graduating from training institutions, the overall supply is still limited by factors such as teacher migration, high turnover rates, and inadequate support for new educators. Oyekunle (2024) also highlighted the role of salaries and working conditions in determining teacher supply. Teachers often leave the profession for better-paying jobs in other sectors or migrate abroad in search of improved opportunities. This migration further diminishes the number of available teachers, particularly in rural areas where teachers are less likely to stay due to poor infrastructure, limited career development opportunities, and low salaries.

Figure 2: Factors Affecting Teacher Supply in Nigeria

The issue of teacher retention has been a recurring theme in educational research. High turnover rates are a significant challenge in Nigeria, especially in rural and underserved areas. In their study, Egara and Mosia (2024) identified the lack of professional development opportunities, inadequate support for teachers, and poor working conditions as factors contributing to the high attrition rate. Teachers in such environments are more likely to leave the profession, exacerbating the existing shortage of qualified educators.

Addressing these issues requires a multifaceted approach that not only focuses on increasing the number of teachers entering the profession but also prioritizes the retention of existing educators. This can be achieved by improving salaries, offering professional development programs, and creating better working conditions for teachers. As noted by Oyekunle (2024), the challenge of teacher supply is not simply about producing more teachers; it is about ensuring that these teachers are well-trained, well-supported, and incentivized to remain in the profession.

Utilization of Teachers in Nigerian Primary Schools

Teacher utilization refers to the degree to which a teacher's available working hours are effectively dedicated to teaching and related educational tasks (Chukwubueze, 2021). A teacher is considered well-utilized when their hours are efficiently allocated to teaching and associated duties, avoiding excessive gaps or overburdening (Osiesi, 2024). This approach allows for thorough classroom preparation and meaningful student engagement. A well-utilized teacher benefits from a balanced weekly schedule, enabling consistent delivery of quality instruction. Conversely, underutilization occurs when a teacher has fewer teaching hours than anticipated (Osiesi, 2024), leading to frequent idle periods and wasted resources, which can negatively impact student learning outcomes. Overutilization is also a concern; a teacher is overutilized when assigned excessive teaching hours, leaving insufficient time for lesson planning, grading, or other responsibilities (Oluwatayo et al., 2024). Such teachers often face large class sizes, chronic stress, fatigue, or burnout, with reduced capacity to provide individual student attention (Chukwubueze, 2021). Several indicators measure teacher utilization (Chukwubueze, 2021; Osiesi, 2024), but this study will focus on two primary ones: teacher-student ratio and teacher workload.

Teacher-Pupil Ratio in Nigerian Primary Schools

The teacher-pupil ratio denotes the number of pupils assigned to each teacher in Nigerian primary schools. The National Policy on Education (Federal Republic of Nigeria [FRN], 2013) stipulates a ratio of 1:35 for effective teaching and learning at this level. However, the United Nations Educational, Scientific and Cultural Organization (UNESCO) recommends a ratio of 1:25 for primary education. A high teacher-pupil ratio remains a significant challenge for primary education in Nigeria. Chukwu (2011) investigated the teacher-pupil ratio in Southeast Nigeria and found limited implementation of the recommended standards, highlighting gaps in achieving the policy's goals.

Opanuga et al. (2019) describe the teacher-pupil ratio as a critical measure of educational quality. Their research revealed that the average teacher-pupil ratio in analyzed data exceeded the national standard of 1:35, with most primary schools showing ratios of 1:50 or higher. This finding confirmed a persistently high teacher-pupil ratio in Nigerian public primary schools. Although Nigeria's educational policy mandates strict adherence to the teacher-pupil ratio across all levels, implementation remains inconsistent, as evidenced by overcrowded classrooms.

Some scholars argue that smaller class sizes enhance student academic performance, asserting that teachers with fewer students can devote more time to individual instruction compared to those managing crowded classes (Ogunode & Ahaotu, 2020).

Teachers' Workload

Another key indicator of teacher utilization is workload, measured by the number of subjects taught and weekly teaching periods. The National Policy on Education (Federal Republic of Nigeria [FRN], 2004) mandates specialist teachers for subjects such as Mathematics, Basic Science, Basic Technology, Physical and Health Education, Language Arts, Music, Fine Arts, Home Economics, and Agriculture to achieve primary education objectives. However, this policy remains poorly implemented in Nigerian primary schools (Akintayo, 2021; Omar, 2022; Marafa, 2025). Instead, the prevailing practice involves a single teacher handling all subjects on the class timetable (Adejumo et al., 2024). Ojo et al. (2012) investigated primary school teachers' comfort with generalized teaching in public schools in Osun State, Nigeria, finding that some teachers felt uneasy with this approach.

This system increases teachers' workload and is suboptimal for education, given that no individual possesses expertise across all domains. The minimum qualification for primary school teaching, as outlined in the National Policy on Education (FRN, 2004), is the Nigeria Certificate in Education (NCE), which limits specialization to a maximum of two subject areas during training. Teachers are thus neither trained nor prepared to teach every subject. Bello et al. (2019) reported that in some states, primary teachers still instruct a single class in all subjects throughout the day. This trend risks producing underprepared pupils who advance to higher education levels with deficiencies. Ojo et al. (2012) suggest that prohibiting one teacher from teaching all subjects could improve pupil academic performance.

Furthermore, a teacher's methodology influences student interest in specific subjects (Ohiwerei & Nwosu, 2009). For instance, an NCE holder specializing in English and Yoruba languages may struggle to effectively teach Mathematics and Science if required to cover all subjects. While primary teachers are often assumed to be generalists capable of instructing all core areas, a growing discourse advocates for specialist teachers in primary settings. Teachers rarely approach all subjects with equal competence. Subject specialization offers distinct benefits: it allows teachers to focus on their strengths, avoiding the pitfalls of being "jacks of all trades," which enhances their sense of professionalism. Additionally, evidence suggests that students perform better under a subject-specialization system than the current generalized approach, as specialization boosts teacher efficiency and effectiveness.

Theoretical Framework

The demand and supply theory in economics, which traditionally applies to the market for goods and services, can also be applied to the education sector, particularly in analysing the teacher labour market (Emeka et al., 2021). In primary education, the demand for teachers is influenced by factors such as student enrolment rates, the number of subjects offered, the teacher-student ratio, and government policies (Gerald & Hussar, 1998). On the supply side, the availability of qualified teachers is impacted by factors such as teacher training programs, salary structures, and migration trends, especially from rural to urban areas (Oyekunle, 2024).

As the price system in a typical market influences the demand and supply of goods, the teacher labour market is similarly influenced by salary levels, training costs, and working conditions. In this context, teachers' wages and job satisfaction are critical determinants of supply, as higher wages generally attract more qualified individuals into the profession (Adekanmbi and Ukpere, 2021). However, the issue becomes more complicated when considering the long-term nature of teacher training, which is not immediately responsive to shifts in demand. Furthermore, factors such as government policy changes, the quality of teacher education, and the professional environment also affect teacher supply (Egara and Mosia, 2024) .

This research employs the demand-supply framework to analyse the relationship between the number of teachers needed in Southwest Nigeria's primary schools and the actual number of teachers available to fill these positions. It explores how factors such as student enrolment, teacher salaries, migration, and government policies contribute to the existing teacher shortages and imbalances in teacher distribution. By doing so, the study offers valuable insights into how the theory of demand and supply can be applied to resolve the challenges facing the Nigerian educational system, especially at the primary school level.

The research is crucial for informing policy decisions at both the state and federal levels. By providing a comprehensive understanding of the factors influencing teacher demand and supply in the region, the study aims to guide policymakers in creating more effective strategies for teacher recruitment, training, and distribution. Additionally, the findings contributes to ongoing debates on how to address teacher shortages and ensure that all students, regardless of their location, have access to qualified and effective teachers.

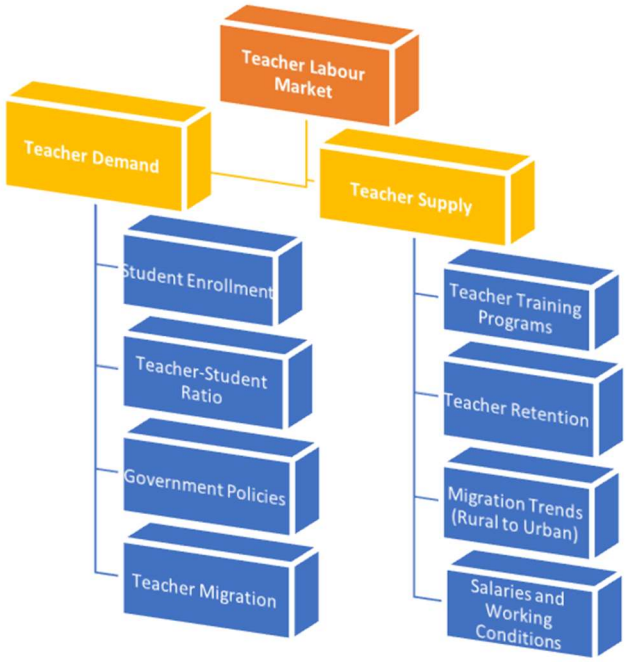

Figure 3: The Demand-Supply Framework in the Teacher Labour Market

3. METHODOLOGY

This study utilized an ex-post facto and descriptive survey design, leveraging pre-existing data to examine trends without manipulating variables. This approach ensures reliable, representative findings by relying on established records from the Universal Basic Education Boards in Southwest Nigeria. The population comprised all public primary schools in the six Southwest states—Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo. Three states—Ekiti, Ondo, and Osun—were randomly selected as the sample to ensure manageable scope and regional representation. Data on pupil and teacher enrollment from every primary school in these states, as provided by the State Universal Basic Education Boards (SUBEBs), formed the study's total population. The investigation analyzed this data to address all research questions.

Secondary data were sourced from the SUBEBs and state Ministries of Education in the sampled states. A structured inventory, detailing pupil and teacher statistics, served as the data collection instrument. Its reliability and internal consistency were assessed using Cronbach's alpha, yielding a coefficient of 0.85, indicating strong consistency in measuring enrollment trends.

Method of Data Collection

Secondary data on teacher and pupil enrollment were obtained from the SUBEBs of Ekiti, Ondo, and Osun states for subsequent analysis.

Method of Data Analysis

Data were analyzed using frequency counts, ratios, percentages, and trend analysis. Frequency counts and percentages quantified enrollment patterns, while ratios assessed teacher-pupil distributions. Trend analysis evaluated changes over time, aligning with the study's aim to explore supply and demand dynamics. These methods provided a clear, concise interpretation of the data.

4. RESULTS AND DISCUSSION

Research Questions

i. What is the level of teachers' demand in public primary schools in Southwest Nigeria?

Table 1. Pupil Enrollment and Teacher Demand in Public Primary Schools in Southwest Nigeria (2018–2023)

S/N	Year	Ondo State		Ekiti State		Osun State	
		Enrolment	Demand	Enrolment	Demand	Enrolment	Demand
1	2018/2019	1,024,155	63,277	129,922	8,664	176,658	11,777
2	2019/2020	509,217	93948	136,002	9,067	217,497	14,500
3	2020/2021	515,941	34396	140,001	9,333	110,455	7,364
4	2021/2022	514,105	34,274	145,663	9,711	204,128	13,609
5	2022/2023	511,167	34,078	154,020	10,268	215,562	14,371
	AVERAGE	614,917	40,995	141,113	9,408	185,860	12,324

Note: Data sourced from the State Universal Basic Education Boards (SUBEBs) of Ekiti, Ondo, and Osun States (2025) [Unpublished raw data].

The data in Table 1 reveal distinct patterns in pupil enrollment and teacher demand across Ondo, Ekiti, and Osun States from the 2018/2019 to 2022/2023 academic sessions. Ondo State recorded the highest average pupil enrollment (614,917) and teacher demand (40,995), significantly surpassing Ekiti (141,113 pupils; 9,408 teachers) and Osun (185,860 pupils; 12,324 teachers). This disparity aligns with a 1:15 teacher-pupil ratio, indicating that Ondo's larger student population drives a greater need for educators compared to the other two states.

Notably, enrollment trends fluctuated over the five-year period. Ondo saw a sharp decline from 1,024,155 pupils in 2018/2019 to 509,217 in 2019/2020, stabilizing around 511,167–515,941 thereafter, yet its teacher demand remained consistently high (34,274–63,277). Ekiti's enrollment grew steadily from 129,922 to 154,020, with a corresponding rise in teacher demand (8,664 to 10,268). Osun exhibited variability, peaking at 217,497 in 2019/2020 and dipping to 110,455 in 2020/2021, before rebounding to 215,562, with demand ranging from 7,364 to 14,500. These fluctuations suggest external factors—such as policy shifts, migration, or economic conditions—may influence enrollment and, consequently, teacher needs.

The high teacher demand in Ondo, averaging 40,995, underscores a persistent strain on educational resources, potentially leading to overcrowded classrooms or reliance on underqualified staff, as noted in prior studies (e.g., Ogunode, 2021). Ekiti and Osun, with lower averages (9,408 and 12,324, respectively), still exceed the National Policy on Education's recommended 1:35 ratio when adjusted to the study's 1:15 benchmark, signaling an unmet need for teachers across all three states. These findings highlight the challenge of balancing enrollment growth with adequate teacher supply, necessitating targeted recruitment and retention strategies to enhance educational quality in Southwest Nigeria's primary schools.

2. What is the level of teachers supply in public primary schools in south west Nigeria?

Table 2: Pupil Enrollment, Teacher Supply, and Teacher Demand in Public Primary Schools in Southwest Nigeria (2018–2023)

	Year	Ondo State			Ekiti State			Osun State		
		Enrolment	Supply	Demand	Enrolment	Supply	Demand	Enrolment	Supply	Demand
1	2018/2019	1,024,155	7,166	63,277	129,922	7,201	8,664	176,658	4,050	11,777
2	2019/2020	509,217	7,174	93948	136,002	7,771	9,067	217,497	7,025	14,500
3	2020/2021	515,941	7,163	34396	140,001	7,485	9,333	110,455	11,641	7,364
4	2021/2022	514,105	7,342	34,274	145,663	7,278	9,711	204,128	7443	13,609
5	2022/2023	511,167	7,342	34,078	154,020	8,662	10,268	215,562	6,683	14,371
	AVERAGE	614,917	7,237	40,995	141,113	7,679	9,408	185,860	7,368	12,324

Note: Data sourced from the State Universal Basic Education Boards (SUBEBs) of Ekiti, Ondo, and Osun States (2025) [Unpublished raw data]. Demand calculated based on a 1:15 teacher-pupil ratio.

Table 2 highlights a significant gap between teacher supply and demand in public primary schools across Ondo, Ekiti, and Osun States from 2018 to 2023. In Ondo State, an average enrollment of 614,917 pupils required 40,995 teachers based on a 1:15 ratio, yet only 7,237 were available—a shortfall of over 80%. This gap was most pronounced in 2019/2020, with a demand of 93,948 against a supply of 7,174, suggesting acute understaffing despite fluctuating enrollment.

Ekiti State, with an average enrollment of 141,113, demanded 9,408 teachers but had 7,679 available, a deficit of approximately 18%. Osun State's average of 185,860 pupils necessitated 12,324 teachers, yet only 7,368 were supplied, leaving a 40% shortage. These disparities indicate a persistent failure to meet ideal staffing levels across all three states. Ondo's supply remained relatively stable (7,163–7,342) despite enrollment swings, hinting at inflexible recruitment or retention policies. Ekiti showed a slight increase in supply (7,201 to 8,662), yet it lagged behind demand, which grew with enrollment. Osun's supply peaked at 11,641 in 2020/2021 but dropped to 6,683 by 2022/2023, despite rising demand, possibly reflecting teacher attrition or budget constraints. The consistent shortfall aligns with broader findings of teacher shortages in Nigeria (e.g., Dike, 2002), undermining educational quality through overburdened staff or reliance on unqualified instructors. Addressing this gap requires strategic interventions, such as increased hiring or incentives, to align supply with the growing needs illustrated in Figure 4.

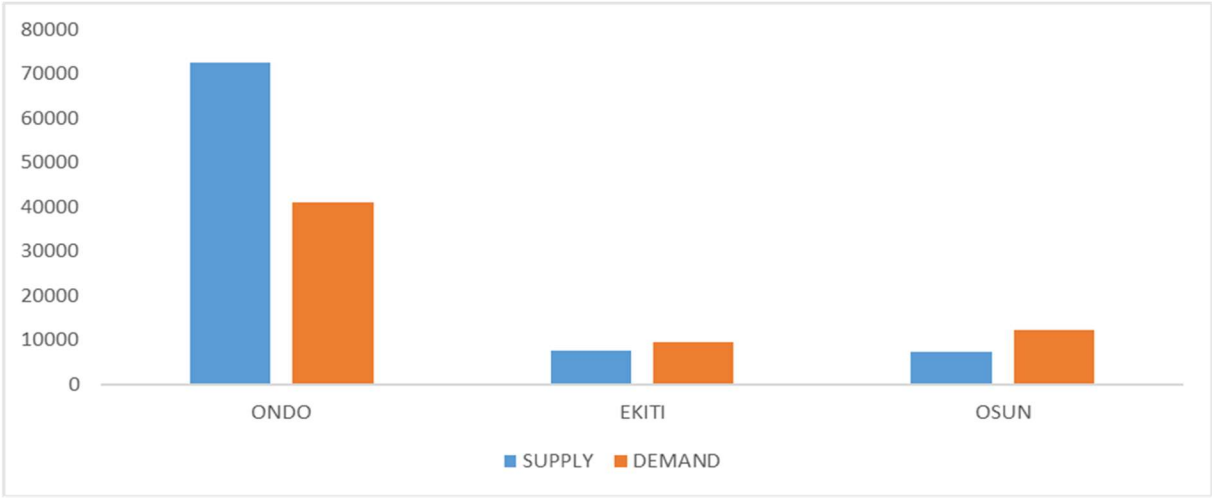

Figure 4: Comparison of the Demand and Supply of Teachers in Ondo, Ekiti and Osun State, Nigeria
Source: Derived from Table 2

3. What is the level of pupils' enrollment in public primary schools in Southwest Nigeria?

Table 3. Teacher-Pupil Ratio in Public Primary Schools in Southwest Nigeria (2018–2023)

		ONDO STATE			EKITI STATE			OSUN STATE		
		Enrolment	Supply	Ratio	Enrolment	Supply	Ratio	Enrolment	Supply	Ratio
1	2018/19	1,024,155	7,166	1:143	129,922	7,201	1:18	176,658	4,050	1:44
2	2019/20	509,217	7,174	1:71	136,002	7,771	1:18	217,497	7,025	1:31
3	2020/21	515,941	7,163	1:72	140,001	7,485	1:19	110,455	11,641	1:10
4	2021/22	514,105	7,342	1:70	145,663	7,278	1:20	204,128	7443	1:27
5	2022/23	511,167	7,342	1:70	154,020	8,662	1:18	215,562	6,683	1:32
	AVERAGE	614,917	7,237	1:85	141,113	7,679	1:18	185,860	7,368	1:25

Note: Data sourced from the State Universal Basic Education Boards (SUBEBs) of Ekiti, Ondo, and Osun States (2025) [Unpublished raw data]. Total schools: Ondo (1,285), Ekiti (911), Osun (1,332). Ratios calculated by dividing enrollment by supply. Table 3 presents the teacher-pupil ratios in public primary schools across Ondo, Ekiti, and Osun States from 2018 to 2023, calculated from enrollment and teacher supply data. Ondo State exhibited the highest average ratio at 1:85, with 614,917 pupils served by just 7,237 teachers. This peaked at 1:143 in 2018/2019, reflecting severe understaffing, though it stabilized around 1:70–1:72 in later years. Ekiti State maintained the lowest average ratio at 1:18, with 141,113 pupils and 7,679 teachers, showing relative consistency (1:18–1:20) across the period. Osun State averaged a 1:25 ratio for 185,860 pupils and 7,368 teachers, with notable variation—from 1:10 in 2020/2021 (due to a supply spike to 11,641) to 1:44 in 2018/2019.

These findings indicate significant disparities in teacher allocation. Ondo's elevated ratio, far exceeding the National Policy on Education's 1:35 standard (Federal Republic of Nigeria, 2013), suggests overcrowded classrooms and strained resources, potentially compromising educational quality. Ekiti's lower ratio aligns more closely with ideal benchmarks (UNESCO's 1:25), indicating better staffing relative to enrollment. Osun's intermediate ratio masks yearly fluctuations, hinting at inconsistent supply adjustments. The results underscore a regional imbalance, with Ondo facing the greatest challenge, followed by Osun, while Ekiti demonstrates the most favorable conditions among the sampled states.

Discussion

The results from Tables 1, 2, and 3 provide a comprehensive view of the dynamics of teacher demand, supply, and teacher-pupil ratios in public primary schools across Ondo, Ekiti, and Osun States from the 2018/2019 to 2022/2023 academic sessions. These findings reveal significant challenges in meeting educational staffing needs, with implications for quality education in Southwest Nigeria. Table 1's depiction of teacher demand shows the highest in Ondo (40,995) followed by Osun (12,324) and Ekiti (9,408). This echoes Adeyemi's (2011) assertion that student enrollment is a primary driver of teacher needs. The significant demand in Ondo, tied to its large average enrollment (614,917), aligns with Adeyemi's findings that population growth and educational reforms, such as the Universal Basic Education (UBE) initiative, amplify staffing requirements. Similarly, Enyiazu (2022) links rising enrollment to increased demand, noting that Nigeria's 5.6% education budget in 2021 which is far below UNESCO's 26% recommendation limits recruitment capacity. However, unlike Adegoroye and Oyetola (2024), who emphasized retirement and urban migration as key demand factors, this study's demand figures stem more from enrollment trends than teacher exits, suggesting a context-specific influence in Southwest states.

Table 2 juxtaposes this demand with actual teacher supply, revealing a stark shortfall. In Ondo, an average of 7,237 teachers was available against a demand of 40,995, giving an 82% deficit. Ekiti supplied 7,679 teachers against a demand of 9,408 (18% shortfall), while Osun provided 7,368 against 12,324 (40% shortfall). This findings corroborates Dike's (2002) observation of an acute shortage of qualified teachers undermining Nigeria's education system. The teacher demand versus teacher supplied gap in Ondo State supports Akinduro's (2003) claim that many students are taught by underqualified educators, a situation worsened by supply failing to scale with demand. In contrast to Kerre (1999), who attributes supply constraints to curriculum policy and teacher training, this study's stable yet insufficient supply points more to funding and recruitment inertia, as Enyiazu (2022)

suggests with brain drain and poor conditions depleting the workforce.
The Osun supply spike (11,641 in 2020/2021) deviates from Samuel et al.'s (2024) focus on school-type shifts, hinting instead at temporary policy or staffing adjustments not sustained over time. The answer to the third research question captured in Table 3 translates the figures into teacher-pupil ratios and offers insight into classroom realities. Ondo's average ratio of 1:85 (614,917 pupils to 7,237 teachers) far exceeds the National Policy on Education's 1:35 benchmark (Federal Republic of Nigeria, 2013), peaking at 1:143 in 2018/2019. This findings mirrors Opanuga et al.'s (2019) findings of high overutilised teachers in Nigerian public primary schools, signaling compromised quality. Ekiti and Osun while closer to UNESCO's 1:25 ideal, still fall short of this study's 1:15 demand benchmark, supporting Ogunode and Ahaotu's (2020) argument that smaller ratios enhance performance by allowing more student attention. However, unlike Chukwu's (2011) focus on Southeast Nigeria's partial policy implementation, this study's ratios reflect a broader Southwest failure to meet even the less stringent 1:35 target, particularly in Ondo. This contrasts with Nduudee and Shedrack (2024), who emphasize quality education's reliance on low ratios, as Ekiti's relative success suggests potential for better outcomes if scaled.

The implications of the result of this study are profound. Ondo's ratio likely leads to overutilized teachers, risking burnout and reliance on unqualified staff, as Chukwubueze (2021) warns. Ekiti's ratio supports more effective teaching, aligning with arguments for smaller class sizes (Ogunode & Ahaotu, 2020). Osun's fluctuating ratios indicate a need for stabilized staffing policies. Collectively, these results deviate from UBE goals, which require adequate, qualified teachers to ensure quality education (Federal Republic of Nigeria, 2013). The data suggest that current supply mechanisms—despite SUBEB efforts—fail to address enrollment-driven demand, echoing Enyiazu's (2022) critique of underfunded education systems.

To address these gaps, targeted interventions are essential. Increasing teacher recruitment in Ondo, stabilizing supply in Osun, and maintaining Ekiti's gains could balance ratios and meet demand. Incentives for retention, as suggested by Nweke et al. (2024), and investment beyond the 5.6% education budget noted by Enyiazu (2022) could mitigate shortages. Without such measures, Southwest Nigeria risks perpetuating an education system where demand outpaces supply, compromising student outcomes.

5. CONCLUSION

This study examined teacher demand, supply, and utilization in public primary schools across Southwest Nigeria, using Ondo, Ekiti, and Osun States as a representative sample from 2018 to 2023. The findings expose significant staffing challenges within the region. In the sampled Ondo State, an average demand of 40,995 teachers contrasted sharply with a supply of 7,237, producing a 1:85 ratio. Ekiti State, with a demand of 9,408 and supply of 7,679, maintained a more balanced 1:18 ratio. Osun State showed a demand of 12,324 against a supply of 7,368, averaging a 1:25 ratio with yearly fluctuations. These results highlight Ondo's acute shortage, Ekiti's relative stability, and Osun's inconsistency, reflecting broader issues in Southwest Nigeria.

The sampled states suggest that teacher supply struggles to match enrollment-driven demand across the region, especially in Ondo, where high ratios imply overcrowded classrooms and strained

resources. Ekiti's lower ratio hints at a feasible standard, while Osun's variability calls for steadier staffing. To improve educational quality throughout Southwest Nigeria, targeted recruitment in high-demand areas like Ondo, stabilized supply in places like Osun, and sustained efforts in Ekiti are critical. Without action, the region risks unequal access to effective schooling.

Limitations

This study is not without limitations. It sampled only Ondo, Ekiti, and Osun States, potentially missing variations across other Southwest states in Nigeria. Dependence on SUBEB secondary data risks inconsistencies from reporting errors or incomplete records. Despite these constraints, the study's robust analysis of enrollment and supply offers valuable insights into teacher allocation challenges.

6. RECOMMENDATIONS

Based on the findings of this study, several steps can enhance teacher demand, supply, and utilisation in Southwest Nigeria's public primary schools. First, increase teacher recruitment in Ondo, where the 1:85 ratio and 82% supply shortfall signal urgent need, targeting at least 30,000 additional teachers to approach a 1:35 ratio. Second, stabilize teacher supply in Osun by addressing fluctuations, possibly through retention incentives like competitive salaries or housing allowances. Third, sustain Ekiti's 1:18 ratio as a regional model by maintaining recruitment and training efforts. Fourth, improve SUBEB data accuracy with regular audits to ensure reliable enrollment and supply records, reducing planning errors. Finally, advocate for increased education funding beyond the current 5.6% to support hiring and infrastructure. These measures can align teacher supply with demand, improving educational quality across Southwest Nigeria.

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