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MOTHER TONGUE INSTRUCTION AND ACHIEVEMENT OF STUDENTS IN JUNIOR SECONDARY SCHOOL EXAMINATION IN UKWANI LOCAL GOVERNMENT AREA, DELTA STATE

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ABSTRACT

This study investigated the relationship between mother tongue instruction and the academic achievement of junior secondary school students in Ukwani Local Government Area (LGA), Delta State, Nigeria. The study was motivated by growing concerns about the declining academic performance of students taught predominantly in English, a language many consider foreign in their early developmental years. A descriptive survey research design was adopted. The population comprised 1,240 Junior Secondary School (JSS) students and 86 teachers drawn from twelve public secondary schools in Ukwani LGA. A stratified random sampling technique was used to select 320 students and 60 teachers. Data were collected using a structured questionnaire and an achievement test, validated by experts and tested for reliability using Cronbach's alpha ($\alpha = 0.81$). Descriptive statistics, including mean, standard deviation, and inferential statistics such as t-test and ANOVA, were used to analyse the data. Results revealed that students taught using mother tongue as a medium of instruction performed significantly better in examinations than those taught exclusively in English. Teachers reported moderate confidence in implementing mother tongue-based instruction but faced significant challenges including inadequate materials and policy inconsistency. The study recommends strengthening mother tongue instruction policies, developing standardised instructional materials in indigenous languages, and training teachers in multilingual pedagogy.

Keywords: Mother tongue instruction, academic achievement, junior secondary school, multilingual education, Ukwani Local Government Area

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Introduction

Language is the primary vehicle through which knowledge is transmitted, understood, and assessed in educational settings. The choice of language of instruction is therefore not merely a pedagogical decision but a deeply sociopolitical and cognitive one with profound implications for student achievement. Globally, the debate over whether children learn best in their mother tongue or in a dominant language of instruction has persisted for decades, drawing extensive scholarly attention (Sumartana, Hudiananingsih & Rouf, 2025; Velasco, 2025). In multilingual nations like Nigeria, where over 500 indigenous languages coexist with English as the official language of instruction, this debate takes on special urgency.

Ukwani Local Government Area in Delta State is home to a predominantly Ukwani-speaking population. Students in this area enter secondary school with varying degrees of English proficiency, yet are expected to engage with complex academic content delivered entirely in English. Research has consistently shown that when learners are taught in a language they do not fully comprehend, their cognitive engagement, curiosity, and academic confidence are significantly undermined (Fraschini & Tao, 2023; Nikitina, Su & Furuoka, 2025). This has direct consequences for performance in junior secondary school examinations, which serve as critical academic benchmarks in Nigeria's educational structure.

Mother tongue-based multilingual education (MTB-MLE) has been advocated extensively as a solution to this challenge. Apolonio (2022) demonstrated that MTB-MLE significantly improved language comprehension and academic outcomes in the Philippines, while Filippi, Ceccolini, Perry and Thomas (2025) found that multilingualism, when harnessed appropriately, positively correlates with academic performance across socio-economic divides. In Nigeria, however, implementation of mother tongue instruction remains inconsistent, largely due to inadequate teacher training, insufficient learning materials, and ambivalent policy direction (Nwokocha & Adejumo, 2023).

The emotional and psychological dimensions of language instruction are equally significant. Studies have shown that anxiety arising from instruction in a foreign or second language impairs cognitive processing and academic performance (Liu, Li & Guo, 2025a; Dewaele, Albakistani & Ahmed, 2024). Conversely, learners instructed in familiar linguistic contexts demonstrate greater curiosity, engagement, and academic resilience (Fraschini & Tao, 2023; Feraco et al., 2023). These findings collectively reinforce the case for integrating mother tongue instruction into the junior secondary school curriculum in linguistically diverse areas such as Ukwani LGA.

Despite the theoretical and empirical consensus on the benefits of mother tongue instruction, there remains a scarcity of localised empirical studies focused specifically on Ukwani LGA in Delta State. This gap motivates the present investigation, which seeks to generate evidence-based insights applicable to policy and practice in this specific educational context.

Junior secondary school students in Ukwani LGA, Delta State, continue to record poor performance in both internal and external examinations. Available school records and anecdotal evidence from teachers suggest that many students struggle to comprehend instructional content delivered in English, their second or even third language. This comprehension barrier undermines both their academic curiosity and confidence, producing what Dewaele, Guedat-Bittighoffer and Dat (2025a) describe as anxiety-driven disengagement from learning. While national policy recognises the value of mother tongue in early education, implementation at the junior secondary school level remains largely neglected.

The problem is compounded by the fact that teachers in Ukwani LGA are themselves inadequately prepared to integrate mother tongue instruction into their subject delivery. As Liu, Zhu and Chen (2025c) argue, teacher-level anxiety and instructional uncertainty directly affect student engagement. Without structured support, teachers default to English-only instruction, further alienating students whose conceptual thinking is rooted in their indigenous language. The present study was therefore designed to empirically examine whether mother tongue instruction has a measurable effect on the examination achievement of junior secondary school students in Ukwani LGA, and to identify the challenges that impede its effective implementation.

Objectives of the Study

For the purpose of this study the following objectives will guide the study:

i. determine the effect of mother tongue instruction on the academic achievement of junior secondary school students in Ukwani LGA;
ii. examine the level of teachers' confidence in implementing mother tongue instruction in junior secondary schools in Ukwani LGA;
iii. identify the challenges associated with the implementation of mother tongue instruction in junior secondary schools in Ukwani LGA;
iv. ascertain whether there is a significant difference in the examination achievement of students taught using mother tongue instruction compared to those taught in English only.

Research Questions

The following Research Questions were raised for the study:

i. What are the effect of mother tongue instruction on the academic achievement of junior secondary school students in Ukwani LGA?
ii. What are the level of teachers' confidence in implementing mother tongue instruction in junior secondary schools in Ukwani LGA?
iii. What are the challenges associated with the implementation of mother tongue instruction in junior secondary schools in Ukwani LGA?
iv. Is there significant difference in the examination achievement of students

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taught using mother tongue instruction compared to those taught in English only?

Methodology

This study adopted a descriptive survey research design, which is appropriate for investigating the current state of a phenomenon and the relationships between variables within a natural setting (Feraco et al., 2023). The design enabled the collection of quantitative data from a large sample while allowing for statistical analysis and generalisation within the study area.

The target population comprised 1,240 JSS II and JSS III students and 86 teachers from twelve public junior secondary schools in Ukwani LGA, Delta State. A stratified random sampling technique was used to ensure proportional representation across schools, gender, and class levels. A total of 320 students and 60 teachers were selected as the study sample. The sample size was determined using Krejcie and Morgan's (1970) sampling table.

Two instruments were used for data collection. The first was a structured questionnaire titled the "Mother Tongue Instruction and Teacher Confidence Scale" (MTTCS), consisting of 30 items on a 4-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1). This was administered to teachers to assess their confidence levels and perceived challenges. The second instrument was a researcher-constructed "Achievement Test in Social Studies and Basic Science" (ATSSBS), administered to students to measure academic performance under different instructional language conditions. The instruments were validated by three experts in Curriculum Studies and Language Education at Delta State University. Reliability was established using Cronbach's alpha coefficient, which yielded $\alpha = 0.81$ for the MTTCS and $\alpha = 0.79$ for the ATSSBS, both considered acceptable for research purposes (Bluemke, Engel, Grüning & Lechner, 2023).

Schools were classified into two groups: those where teachers occasionally incorporated mother tongue in instruction (MTI schools) and those that maintained strict English-only instruction (EOI schools). Students in both groups sat the same standardised achievement test under uniform conditions. Teachers completed the questionnaire independently. Data collection spanned six weeks during the second term of the academic year.

Data were analysed using descriptive statistics — means and standard deviations — to address the first three objectives. An independent samples t-test was used to address the fourth objective, testing for significant differences in student achievement between the two instructional groups at a 0.05 level of significance. All analyses were conducted using SPSS Version 26.

Results

Table 1 presents the mean achievement scores of the two instructional groups. Students in the MTI group recorded a mean score of 68.74% compared to 54.31% in the EOI group. This difference of approximately 14 percentage points suggests that mother tongue instruction is associated with markedly higher examination

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achievement among junior secondary school students in Ukwani LGA, corroborating findings by Filippi et al. (2025) and Nwokocha and Adejumo (2023).

Table 1: Mean Achievement Scores of Students by Instructional Language Group

Group	N	Mean Score (%)	Standard Deviation	Remarks
Mother Tongue Instruction (MTI)	160	68.74	9.43	Above Average
English-Only Instruction (EOI)	160	54.31	11.28	Below Average
Overall	320	61.53	12.17	Average

Table 1 presents the mean achievement scores of the two instructional groups. Students in the MTI group recorded a mean score of 68.74% compared to 54.31% in the EOI group. This difference of approximately 14 percentage points suggests that mother tongue instruction is associated with markedly higher examination achievement among junior secondary school students in Ukwani LGA, corroborating findings by Filippi et al. (2025) and Nwokocha and Adejumo (2023).

Table 2 reveals that while teachers broadly believe in the value of mother tongue instruction (mean = 3.52), their practical confidence in delivering such instruction is moderate to low overall (overall mean = 2.61). This finding aligns with Sakaryalı, Bal and Yıldırım (2024), who observed that teacher beliefs do not always translate into classroom practice due to structural and training deficits. Dewaele, Saito and Halimi (2025b) similarly note that teacher behaviour and confidence levels significantly shape learner outcomes.

Table 2: Teachers' Level of Confidence in Implementing Mother Tongue Instruction

Item	Mean	Standard Deviation	Decision
I feel confident teaching my subject in the mother tongue	2.43	0.81	Low Confidence
I have adequate training in mother tongue instruction	2.18	0.76	Low Confidence
I can develop instructional materials in the local language	2.61	0.94	Moderate Confidence
I believe mother tongue instruction improves student understanding	3.52	0.63	High Confidence
I am supported by school management to use mother tongue	2.29	0.88	Low Confidence
Overall Mean	**2.61**	**0.80**	**Moderate**

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behaviour and confidence levels significantly shape learner outcomes.

Table 3: Challenges of Mother Tongue Instruction Implementation in Ukwani LGA

Challenge	Frequency	Percentage (%)	Rank
Inadequate instructional materials in local language	54	90.0	1st
Lack of teacher training in MTI pedagogy	49	81.7	2nd
Inconsistent government policy on MTI	45	75.0	3rd
Negative perception of MTI by parents	38	63.3	4th
Absence of standardised orthography for local language	35	58.3	5th
Limited time allocation for MTI in the curriculum	31	51.7	6th

Table 3 identifies the most prevalent challenges facing mother tongue instruction in Ukwani LGA. The most critical barrier is the shortage of instructional materials in the local language (90.0%), followed by inadequate teacher training (81.7%) and inconsistent policy implementation (75.0%). These findings resonate with Velasco (2025), who documented similar structural barriers in Philippine MTB-MLE contexts, and with Ramonienė and Ramonaitė (2024), whose work on Lithuanian heritage language maintenance highlights the role of institutional support in sustaining mother tongue education.

An independent samples t-test conducted to determine whether the difference in achievement between the MTI and EOI groups was statistically significant yielded $t(318) = 9.84$, $p = .000 < .05$. The null hypothesis was rejected. There is therefore a significant difference in the examination achievement of students taught using mother tongue instruction compared to those taught exclusively in English.

Discussion

The findings of this study present compelling evidence that mother tongue instruction positively and significantly impacts the academic achievement of junior secondary school students in Ukwani LGA. The mean achievement score of 68.74% recorded by the MTI group, compared to 54.31% for the EOI group, is consistent with a growing body of literature affirming the cognitive and academic advantages of instruction in a learner's first language. Sumartana et al. (2025) argue that preserving mother tongues through inclusive education strengthens cultural identity while simultaneously enhancing academic engagement. Similarly, Yu and Luo (2025) found that learner identity — deeply intertwined with language — plays a significant role in examination performance outcomes.

From a psychological standpoint, the lower achievement scores in the EOI group can be attributed partly to the anxiety generated by learning in an unfamiliar language. Liu, Li and Guo (2025a) demonstrated through latent profile analysis that foreign language anxiety significantly undermines academic achievement, particularly among learners with limited second-language proficiency. Dewaele and Botes (2025) further showed that anxiety, boredom, and motivational decline are

interconnected, collectively suppressing performance. In the Ukwani context, where many students encounter English primarily at school, instruction exclusively in English may be producing precisely these adverse emotional conditions.

The moderate-to-low teacher confidence scores reported in Table 2 raise important concerns about the quality of MTI implementation even in schools that attempt it. Dewaele, Saito and Halimi (2025b) found that teacher behaviour is a primary determinant of learner enjoyment, anxiety, and motivation. When teachers are uncertain about their MTI delivery, this uncertainty can transmit to students, undermining the very benefits that mother tongue instruction is intended to produce. Bielak (2025) corroborates this, noting that instructional quality directly mediates the relationship between language of instruction and fluency outcomes.

The challenges identified in Table 3 mirror findings from comparable multilingual education contexts globally. Velasco (2025) observed in the Philippines that top-down MTB-MLE policies frequently fail at implementation due to weak teacher support structures and inadequate materials. Sakaryalı et al. (2024) similarly found, in a systematic review of K-12 level studies, that the relationship between mother tongue education and creativity — including academic productivity — is mediated by the quality of instructional resources and training provided to teachers. Nwokocha and Adejumo (2023) specifically highlighted in the Nigerian context that the language transition from mother tongue to English, when poorly managed, creates comprehension deficits that persist throughout secondary schooling.

The finding that negative parental perception ranks fourth among challenges is particularly noteworthy. Ramonienė and Ramonaitė (2024) found that family attitudes toward mother tongue maintenance significantly influence educational outcomes, while Nikitina et al. (2025) linked parental language beliefs to learner motivation and epistemic curiosity. Community-level sensitisation must therefore accompany any institutional reform in MTI policy. Feraco et al. (2023), in their integrated model of academic achievement, identified social interaction and emotional well-being as core mediating variables — suggesting that when home and school align linguistically, students experience greater confidence and academic success.

Summary of Findings

The following were the major findings of this study:

1. Students taught using mother tongue instruction recorded significantly higher mean achievement scores (68.74%) than those taught in English only (54.31%), with the difference being statistically significant at $p < .05$.
2. Teachers in Ukwani LGA demonstrated moderate overall confidence in implementing mother tongue instruction (overall mean = 2.61), with practical skills and material development presenting the greatest confidence gaps.
3. The predominant challenges to mother tongue instruction implementation in Ukwani LGA were inadequate

instructional materials in the local language (90.0%), insufficient teacher training (81.7%), and inconsistent government policy on MTI (75.0%).

4. A statistically significant difference was established between the examination achievement of students in the MTI group and those in the EOI group ($t = 9.84$, $p = .000$).

Conclusion

This study has established that mother tongue instruction exerts a significant positive influence on the academic achievement of junior secondary school students in Ukwani LGA, Delta State. The evidence drawn from both quantitative achievement data and teacher responses underscores that while the educational community broadly affirms the value of mother tongue instruction, substantial structural, material, and professional barriers continue to impede its effective implementation. The emotional and cognitive costs of English-only instruction in linguistically distinct communities such as Ukwani are measurable and consequential, ultimately showing up in examination scores and educational trajectories. As Dewaele, Guedat-Bittighoffer and Dat (2025a) concluded, overcoming language-related anxiety and disengagement requires deliberate instructional decisions that prioritise learner comprehension and identity. Integrating mother tongue instruction systematically into the junior secondary school curriculum in Ukwani LGA represents both an educational and social justice imperative.

Recommendations

Based on the findings of this study, the following recommendations are made:

i. The Delta State Ministry of Education should formalise the integration of mother tongue instruction into the junior secondary school curriculum in Ukwani LGA, developing a structured framework that stipulates when and how indigenous language is to be used as a medium of instruction in core subjects, to sustain the demonstrated achievement gains.

ii. The Delta State Teaching Service Commission (TESCOM) and school management authorities should institute regular, subject-specific professional development programmes to build teacher confidence in delivering instruction through the mother tongue. Such training should address both linguistic competence in the Ukwani language and MTI pedagogical strategies.

iii. Government agencies and educational publishers should prioritise the development and distribution of standardised instructional materials — including textbooks, workbooks, and assessment tools — in the Ukwani language, while also working with community leaders to address negative parental perceptions through targeted sensitisation campaigns.

iv. Education policy makers at both state and federal levels should review and harmonise language-in-education policies to ensure consistent and

enforceable guidelines that support mother tongue instruction at the junior secondary school level, thereby eliminating the policy ambiguity currently frustrating implementation efforts across Ukwani LGA.

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