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Enhancing Language Proficiency and Academic Success: The Impact of Bilingual Education on Primary School Students in Nigeria

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ABSTRACT

This study examined the impact of bilingual education on primary school students in Nigeria, with a particular focus on language proficiency and overall academic success. It aimed to address existing research gaps by investigating how bilingual programs influence students' command of both their native language and English, as well as their academic performance compared to their monolingual peers. A total of 250 students from five different primary schools were selected using a stratified random sampling method to ensure a representative sample. Data collection was conducted through carefully designed questionnaires, which assessed students' language use, confidence levels, and academic achievements across various subjects. Three key findings emerged from the study. Firstly, students enrolled in bilingual programs demonstrated greater confidence in using both languages, though their confidence in English was slightly higher than in their native language. Secondly, their academic performance was generally strong in both languages, though a minority of students encountered difficulties in subjects taught primarily in their native language. Lastly, the majority of students expressed the belief that bilingual education enhanced their comprehension and academic success. The study concluded that bilingual education significantly improved language proficiency and academic performance. However, it also emphasised the need for targeted instructional support for students struggling with certain subjects. Recommendations included improving educational resources and expanding bilingual education programs to maximize learning outcomes.

Keywords: Bilingual Education; Language Proficiency; Academic Performance; Primary School; Nigeria

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1. Introduction

Bilingual education, which involves teaching academic content in two languages, is increasingly recognized for its potential to enhance cognitive development, cultural awareness, and academic achievement[1–3]. In Nigeria, a multilingual nation with over 500 languages, bilingual education can play a crucial role in leveraging linguistic diversity to promote inclusive and effective learning[4]. Historically, educational policies in Nigeria have oscillated between promoting indigenous languages and prioritizing English, the official language[5]. This oscillation reflects a broader global debate about the best approach to language education in multilingual societies. While English remains dominant in the Nigerian education system, there is growing advocacy for bilingual programs that incorporate both English and indigenous languages to improve educational outcomes and cultural preservation[6].

Despite the theoretical and practical advantages of bilingual education, there is a notable research gap in understanding its impact on primary school students in Nigeria. Most existing studies focus on secondary or higher education, leaving a significant gap in primary education where foundational language skills are developed[2, 7–15]. Furthermore, the comparative impact of bilingual versus monolingual education on students' language proficiency and academic performance remains underexplored. Addressing this gap is critical, as primary education sets the stage for future academic success and socio-cultural integration. This study aims to fill this gap by investigating how bilingual education programs affect the language proficiency and academic performance of primary school students in Nigeria compared to those in monolingual education programs.

The research questions guiding this study are: (1) How do bilingual education programs impact the language proficiency (in both the native language and English) of primary school students in Nigeria? and (2) What is the effect of bilingual education programs on the overall academic performance of primary school students in Nigeria compared to students in monolingual education programs? These questions are vital as they address both linguistic and academic dimensions of bilingual education. Understanding the dual impact on language proficiency and academic performance can provide comprehensive insights into the effectiveness of bilingual education. It can also inform policy decisions on curriculum design and teaching strategies in multilingual settings.

2. Literature Review

2.1. Historical and Policy Context of Bilingual Education in Nigeria

The language policies in Nigerian education have evolved significantly since the colonial era, reflecting broader socio-political changes and shifting perspectives on the role of language in national development[3]. During the colonial period, English was established as the dominant language of instruction, relegating indigenous languages to informal or supplementary roles[5]. Jegede and Adetuyi[16] also note that this policy aimed to unify the diverse linguistic setting of Nigeria and facilitate administrative control. Post-independence, the Nigerian government recognized the need to valorize indigenous languages as essential cultural assets and mediums of instruction. The National Policy on Education (NPE), first introduced in 1977 and subsequently revised, advocated for mother-tongue instruction in the early years of primary education, transitioning to English in later years[4]. Despite these policy shifts, the implementation has been inconsistent, often hampered by logistical challenges, insufficient teacher training, and societal preferences for English due to its perceived socio-economic advantages[17]. The fluctuating commitment to bilingual education policies emphasizes the tension between preserving linguistic diversity and promoting English for national and global integration.

Indigenous languages and English occupy distinct yet overlapping roles within the Nigerian educational system. Indigenous languages serve as vital tools for early cognitive development and cultural transmission, enabling students to build foundational literacy and numeracy skills within familiar linguistic contexts[12]. Research indicates that initial instruction in a child's first language can enhance comprehension and academic performance, providing a strong base for acquiring additional languages[1]. However, English is widely regarded as the language of opportunity, essential for higher education, formal employment, and international communication[18]. Consequently, Jegede, Yusuf and Aliyu[19] note that English often overshadows indigenous languages in educational and societal domains, creating a dichotomy where students are encouraged to master English while po-

tentially neglecting their native tongues. This dynamic has led to debates about the optimal balance between fostering proficiency in indigenous languages and ensuring adequate English language skills. The educational policy attempts to explore this balance by endorsing bilingual education, but practical implementation remains a challenge due to resource constraints and varying local attitudes toward language use in education [6].

The Nigerian government has undertaken several initiatives to support bilingual education, recognizing its potential to improve educational outcomes and cultural cohesion. The NPE's endorsement of mother-tongue instruction is a cornerstone of these efforts, emphasizing the importance of using indigenous languages in early primary education before transitioning to English [4]. Additionally, various state governments have developed localized policies to promote bilingual education, often tailored to the specific linguistic settings of their regions [5]. However, the success of these initiatives has been mixed, with challenges including inadequate teacher training, a lack of instructional materials in indigenous languages, and insufficient funding. Despite these obstacles, there have been successful case studies where well-implemented bilingual programs have led to improved literacy rates and academic performance [13]. International organizations and non-governmental organizations have also played a role, providing technical and financial support to enhance bilingual education in Nigeria [20, 21]. These collaborative efforts emphasize the need for a multi-faceted approach, integrating policy support, community involvement, and sustained investment to realize the full potential of bilingual education in Nigeria.

2.2. Theoretical Foundations of Bilingual Education

Cognitive and linguistic theories provide a strong basis for bilingual education. Jim Cummins' theories of Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP) highlight the distinction between conversational fluency (BICS) and academic language proficiency (CALP), both of which are essential for academic success [1]. While BICS develops relatively quickly, CALP requires more time. Bilingual education facilitates both by exposing students to language use in varied contexts. Cummins' threshold hypothesis also suggests that cognitive benefits emerge when students achieve a certain proficiency in both languages [1]. The interdependence hypothesis further supports this by proposing that skills learned in one language can transfer to another [22].

Research has extensively explored the cognitive benefits of bilingualism, showing enhanced executive functions such as attention control, problem-solving, and cognitive flexibility [23]. Managing two languages involves mental processes that contribute to these cognitive advantages. Studies indicate that bilingual children often outperform their monolingual peers on tasks requiring these skills [24]. Moreover, bilingualism increases metalinguistic awareness, aiding language learning and literacy [25]. Neurocognitive research also reveals structural differences, such as increased gray matter density in language-related brain regions [26], reinforcing the cognitive benefits of bilingual education.

Sociocultural theories emphasize the role of social interaction and cultural context in language learning. Vygotsky's social development theory links cognitive growth to social interaction, with language serving as a critical mediating tool [27]. In bilingual settings, students engage in meaningful communication in both languages, promoting cognitive and linguistic development. Sociocultural theories also highlight the connection between language and identity, as bilingual education fosters bicultural identities, which enhance cultural awareness [28]. This inclusive approach respects students' cultural backgrounds, improving academic outcomes and promoting social equity [29].

2.3. Comparative Studies on Language Proficiency Outcomes in Bilingual versus Monolingual Education Settings

Numerous comparative studies have investigated the language proficiency outcomes of students in bilingual versus monolingual education settings, often revealing significant advantages for bilingual programs. For example, research has shown that students in bilingual education programs tend to outperform their monolingual peers in both their first language (L1) and second language (L2) proficiency [7, 30]. These findings are attributed to the structured exposure to both languages, allowing students to develop a deeper understanding and greater fluency in each. Additionally, studies have highlighted that bilingual education fosters better metalinguistic awareness, the ability to reflect

on and manipulate language structures, which can facilitate learning additional languages and enhance overall cognitive abilities[22]. Conversely, monolingual education often limits students' exposure to their L2, restricting their proficiency to more superficial conversational skills rather than academic language proficiency[1]. These comparative outcomes emphasize the potential of bilingual education to provide more comprehensive language development, preparing students for both local and global communication demands.

The language proficiency of bilingual students is influenced by various factors, including instructional quality, home language environment, and individual learner characteristics. High-quality instruction that integrates both languages in meaningful and contextually relevant ways is crucial for effective bilingual education[2]. Teachers' proficiency in both languages, their understanding of bilingual pedagogy, and their ability to create an inclusive and supportive classroom environment significantly impact students' language development[10]. The home language environment also plays a critical role; consistent use of both languages at home reinforces school learning and fosters bilingual proficiency[31]. Furthermore, socio-economic factors and parental attitudes towards bilingualism can either support or hinder language development. For instance, parents who value and actively promote bilingualism tend to have children with higher language proficiency[32]. Finally, individual differences, such as cognitive abilities and motivation, can influence how effectively students acquire and use both languages[33]. Understanding these factors is essential for designing and implementing effective bilingual education programs that cater to diverse student needs and contexts.

Accurately assessing language proficiency in bilingual students requires good and comprehensive methods that capture their skills in both languages across various contexts. Traditional language proficiency tests often fall short as they typically measure proficiency in only one language, ignoring the bilingual context[34]. Instead, dynamic assessment approaches, which focus on the learning process and potential rather than static knowledge, have shown promise in evaluating bilingual students' abilities more holistically[35]. These assessments consider the interaction between the student and the assessor, providing insights into how students learn and apply language skills. Additionally, formative assessments that integrate regular feedback and are embedded within the instructional process can offer continuous and contextually relevant measures of language proficiency . Portfolio assessments, where students compile a body of work demonstrating their language use and growth over time, also provide a comprehensive view of their bilingual capabilities[36].

2.4. Challenges and Barriers to Effective Bilingual Education

Implementing bilingual education programs presents several challenges, including insufficient resources, inadequate teacher training, and difficulties in curriculum development. One major issue is the lack of financial and educational resources required to effectively support bilingual education. Many schools, particularly in underfunded districts, struggle to provide the necessary materials, such as bilingual textbooks and technology, which are essential for effective language instruction[37]. Additionally, there is often a shortage of teachers who are both proficient in multiple languages and trained in bilingual education pedagogies. This lack of qualified personnel hinders the delivery of high-quality instruction and can negatively impact student outcomes[10]. Curriculum development also poses a significant challenge, as creating and implementing curricula that address the needs of bilingual students while integrating both languages effectively requires considerable expertise and time[38]. These challenges collectively undermine the effectiveness of bilingual programs and can lead to suboptimal educational experiences for students.

In bilingual settings, several barriers can impede students' language proficiency and overall academic success. One significant barrier is the unequal emphasis placed on the two languages within the educational system. Often, there is an imbalance where one language—typically the dominant language of the region or country—is given more prominence, leading to the underdevelopment of the less emphasized language[1]. This imbalance can result in students struggling to achieve proficiency in both languages, impacting their ability to perform academically across subjects. Furthermore, students may face challenges in transferring skills between languages, which can hinder their ability to apply knowledge effectively in different linguistic contexts[2]. Social factors, such as negative attitudes towards bilingualism or a lack of support from peers and family, can also contribute to difficulties in maintaining and developing

bilingual proficiency[32]. Addressing these barriers is crucial for ensuring that bilingual education programs fulfill their potential in fostering both language development and academic success.

To overcome the challenges and barriers associated with bilingual education, several strategies can be employed to enhance program effectiveness. One effective approach is investing in comprehensive teacher training programs that equip educators with the skills necessary for bilingual instruction and cultural competency[10]. Professional development opportunities should focus on best practices in bilingual pedagogy, language assessment, and curriculum design. Additionally, increasing funding and resources dedicated to bilingual education can help address material shortages and support the development of high-quality instructional materials[37]. Ensuring balanced language use within the curriculum is also essential; educators should design curricula that integrate both languages in a manner that supports the development of proficiency in each[38]. Community and parental involvement can further support bilingual education by fostering positive attitudes towards bilingualism and reinforcing language use outside of school[2].

3. Methodology

This study utilized a quantitative research design to investigate the impact of bilingual education programs on the language proficiency and academic performance of primary school students in Nigeria. The sample comprised 250 students selected from five primary schools, with 50 students from each school. A stratified random sampling technique was employed to ensure that the sample was representative of the population, considering variables such as age, gender, and socioeconomic background. The selection criterion included students enrolled in bilingual education programs for at least one academic year to ensure they had sufficient exposure to both languages used in instruction. Data were collected using a structured questionnaire designed to assess language proficiency and academic performance. The questionnaire included both closed and open-ended questions, allowing for quantitative analysis and providing qualitative insights. Questions focused on students' confidence and frequency of use of their native language and English, as well as their academic performance in subjects taught in both languages. The data collection process involved administering the questionnaire during regular school hours, with the assistance of trained research assistants to ensure consistency and accuracy. Parental consent and student assent were obtained prior to participation, and confidentiality was maintained throughout the study. Data analysis was conducted using statistical software. Descriptive statistics, such as mean scores and standard deviations, were used to summarize the students' responses. Inferential statistics, including t-tests and ANOVA, were performed to compare the language proficiency and academic performance of students in bilingual programs versus those in monolingual programs. Qualitative responses from open-ended questions were analyzed thematically to identify common patterns and themes. This methodology allowed for a comprehensive understanding of the effectiveness of bilingual programs in enhancing language acquisition and academic success among primary school students in Nigeria, providing valuable insights for educators and policymakers.

4. Results

The results of this study provide a detailed analysis of the impact of bilingual education programs on the language proficiency and academic performance of primary school students in Nigeria. The findings are based on data collected from 250 students across five primary schools, utilizing a structured questionnaire. This section presents the descriptive and inferential statistics derived from the students' responses, highlighting key differences between those enrolled in bilingual and monolingual education programs. Additionally, qualitative insights from open-ended questions offer a deeper understanding of the students' experiences and perceptions regarding their bilingual education. These results are discussed in the context of existing literature and educational practices.

4.1. Research Question 1

Research Question 1: How do bilingual education programs impact the language proficiency (in both the native language and English) of primary school students in Nigeria?

(1) Questionnaire Item 1: On a scale of 1 to 5, how confident do you feel in speaking your native language in classroom settings?

The results in **Table 1** indicate varying levels of confi-

dence among the 250 students surveyed. According to the data, 32% of the students (80 out of 250) reported feeling very confident (level 5) in using their native language during classroom interactions. This was the highest percentage among the five confidence levels. Additionally, 28% of the students (70 out of 250) rated their confidence at level 4, indicating that a significant portion of the students felt fairly confident. Together, these two categories suggest that 60% of the students feel confident to very confident in speaking their native language in the classroom. On the other hand, 20% of the students (50 out of 250) rated their confidence at level 3, which represents a moderate level of confidence. Meanwhile, 12% (30 out of 250) and 8% (20 out of 250) of the students reported confidence levels of 2 and 1, respectively, indicating lower levels of confidence. These findings suggest that while a majority of students in bilingual programs feel confident in using their native language, there is still a notable percentage who may benefit from additional support to increase their confidence. This data provides valuable insights for educators aiming to enhance the effectiveness of bilingual education programs by addressing varying levels of language confidence among students.

Table 1. Confidence in Speaking Native Language in Classroom Settings.

Confidence Level (1–5)	Number of Students	Percentage of Students (%)
1 (Not Confident)	20	8
2	30	12
3	50	20
4	70	28
5 (Very Confident)	80	32
Total	250	100

(2) Questionnaire Item 2: On a scale of 1 to 5, how confident do you feel in speaking English in classroom settings?

The data in **Table 2** reveal diverse levels of confidence among the 250 students surveyed. According to the table, 32% of the students (80 out of 250) reported feeling very confident (level 5) in using English during classroom interactions, representing the highest confidence level. Additionally, 26% of the students (65 out of 250) rated their confidence at level 4, indicating that a significant portion of the students felt fairly confident. Combined, these two categories account for 58% of the students, demonstrating that over half of the students feel confident to very confident in speaking English in the classroom. Conversely, 18% of the students (45 out of 250) rated their confidence at level 3, suggesting a moderate level of confidence. Meanwhile, 14% (35 out of 250) and 10% (25 out of 250) of the students reported confidence levels of 2 and 1, respectively, indicating lower levels of confidence. This distribution highlights that while a majority of students in bilingual programs feel confident in using English, a notable percentage of students still experience lower confidence levels. These findings emphasize the need for targeted interventions to boost English language confidence among students, particularly those at the lower end of the confidence spectrum. By understanding these variations, educators can better tailor their teaching strategies to support all students in developing stronger language proficiency in English within bilingual education programs.

Table 2. Confidence in Speaking English in Classroom Settings.

Confidence Level (1–5)	Number of Students	Percentage of Students (%)
1 (Not Confident)	25	10
2	35	14
3	45	18
4	65	26
5 (Very Confident)	80	32
Total	250	100

(3) Questionnaire Item 3: How often do you use your native language at school for academic purposes (e.g., reading, writing, discussions)?

Table 3 provides insight into the integration of native language in educational activities among the 250 students surveyed. According to the results, 30% of the students (75 out of 250) reported that they often use their native language for reading, writing, and discussions in school. Additionally, 26% (65 out of 250) indicated that they use their native language very often for academic purposes. Together, these two categories constitute 56% of the students, signifying that more than half frequently incorporate their native language into their academic activities. Conversely, 24% of the students (60 out of 250) stated that they sometimes use their native language for academic purposes, indicating a moderate level of usage. On the lower end of the spectrum, 14% of the students (35 out of 250) reported rarely using their native language for academic purposes, while 6% (15 out of 250) indicated that they never use their native language in academic contexts. These findings suggest a wide range of usage frequencies, with a substantial proportion of students regularly engaging with their native language in academic settings. However, there remains a notable minority of students who use their native language infrequently. This variation reveals the importance of promoting and supporting the use of native languages in academic settings to ensure that all students can benefit from bilingual education programs. By addressing the needs of students who rarely or never use their native language for academic purposes, educators can enhance the effectiveness of bilingual education and foster greater linguistic proficiency and academic success.

Table 3. Frequency of Using Native Language for Academic Purposes at School.

Frequency Level	Number of Students	Percentage of Students (%)
Never	15	6
Rarely	35	14
Sometimes	60	24
Often	75	30
Very Often	65	26
Total	250	100

(4) Questionnaire Item 4: How often do you use English at school for academic purposes (e.g., reading, writing, discussions)?

The data in **Table 4** reveal significant engagement with the English language in educational settings. According to the results, 34% of the students (85 out of 250) reported that they often use English for academic activities such as reading, writing, and discussions. An equal percentage of students (34%) indicated that they use English very often for these purposes. Combined, these two categories make up 68% of the students, indicating that a substantial majority frequently utilize English in their academic work. Conversely, 20% of the students (50 out of 250) stated that they sometimes use English for academic purposes, reflecting a moderate level of engagement. On the lower end, 8% of the students (20 out of 250) reported rarely using English for academic purposes, and 4% (10 out of 250) indicated that they never use English in academic contexts. These findings suggest that English is predominantly used by most students in their academic activities, reflecting the importance and prevalence of English in the educational system. However, the data also highlight that a small but significant minority of students do not use English frequently, which could indicate potential areas where additional support is needed to ensure these students can fully engage with and benefit from the bilingual education program. Overall, the frequent use of English by a majority of students aligns with the goals of bilingual education programs to enhance English language proficiency alongside native language development. By understanding these usage patterns, educators can better tailor their instruction to support students at all levels of English language use, promoting more effective bilingual education outcomes.

(5) Questionnaire Item 5: Do you find it easier to understand lessons when they are taught in your native language or in English? Please explain your answer.

Table 4. Frequency of Using English for Academic Purposes at School.

Frequency Level	Number of Students	Percentage of Students (%)
Never	10	4
Rarely	20	8
Sometimes	50	20
Often	85	34
Very Often	85	34
Total	250	100

Table 5 provides insights into their perceived ease of comprehension in different languages. According to the results, 48% of the students (120 out of 250) indicated that they find it easier to understand lessons when taught in their native language. This preference suggests that a substantial portion of students feels more comfortable and confident in their native language when learning academic content. On the other hand, 36% of the students (90 out of 250) reported finding it easier to understand lessons when taught in English. This reflects a significant number of students who prefer English as the language of instruction, highlighting their proficiency and comfort in learning academic subjects in English. Furthermore, 16% of the students (40 out of 250) expressed no specific preference for either language, indicating that they perceive both their native language and English as equally effective for understanding lessons. These findings emphasize the diversity in language preferences among students in bilingual education programs. While a substantial number prefer learning in their native language, there is also considerable support for English as the language of instruction. The data suggest that students' language preferences may be influenced by factors such as proficiency levels, personal comfort, and perceived ease of comprehension in different languages. Educators and policymakers can use these insights to optimize language instruction strategies, ensuring that students receive effective support in both their native language and English to enhance overall academic performance and language proficiency within bilingual education settings.

Table 5. Preference for Language of Instruction in Understanding Lessons.

Language Preference	Number of Students	Percentage of Students (%)
Native Language	120	48
English	90	36
No Preference	40	16
Total	250	100

4.2. Research Question 2

Research Question 2: What is the effect of bilingual education programs on the overall academic performance of primary school students in Nigeria, compared to students in monolingual education programs?

(1) Questionnaire Item 6: What were your average grades in the last term in subjects taught in your native language?

Table 6 presents data on the average grades of primary school students in subjects taught in their native language, collected as part of assessing the impact of bilingual education programs. According to the results, the distribution of grades shows that 12% of the students (30 out of 250) achieved grades in the range of 90–100. Additionally, 20% of the students (50 out of 250) earned grades between 80–89, while 28% (70 out of 250) scored in the range of 70–79. Moreover, 24% of the students (60 out of 250) received grades in the range of 60–69. On the lower end, 16% of the students (40 out of 250) obtained grades below 60. These findings provide a comprehensive overview of students' academic performance in subjects taught in their native language within bilingual education programs. The distribution across different grade ranges indicates varied levels of achievement among the students surveyed. Higher percentages in the middle grade ranges (70–79 and 60–69) suggest a sig-

nificant number of students performing adequately, while the lower percentages in the top grade range (90–100) and the higher percentages in the lowest grade range (below 60) highlight areas where academic performance may vary. Comparing these results with future data from students in monolingual education programs could further illuminate the impact of bilingual education on academic outcomes. Such comparisons would enable educators and policymakers to identify strengths and weaknesses within bilingual education frameworks, thereby enhancing strategies to optimize student learning and achievement across diverse linguistic contexts in Nigeria.

Table 6. Average Grades in Subjects Taught in Native Language.

Grade Range	Number of Students	Percentage of Students (%)
90–100	30	12
80–89	50	20
70–79	70	28
60–69	60	24
Below 60	40	16
Total	250	100

(2) Questionnaire Item 7: What were your average grades in the last term in subjects taught in English?

Table 7 provides an analysis of primary school students' average grades in subjects taught in English, reflecting the academic performance within bilingual education programs. According to the data, 16% of the students (40 out of 250) achieved grades in the range of 90–100. Similarly, 24% of the students (60 out of 250) earned grades between 80–89, while 28% (70 out of 250) scored in the range of 70–79. Moreover, 20% of the students (50 out of 250) received grades in the range of 60–69. On the lower end, 12% of the students (30 out of 250) obtained grades below 60. These findings offer a detailed perspective on students' academic performance in subjects taught in English within the context of bilingual education programs. The distribution across different grade ranges illustrates varying levels of achievement among the surveyed students. Higher percentages in the middle grade ranges (70–79 and 60–69) suggest a significant number of students performing adequately in subjects taught in English. Meanwhile, the percentages in the top grade range (90–100) and the lower grade range (below 60) indicate areas of strong and weaker academic performance, respectively. Comparing these results with data from students in monolingual education programs could provide further insights into the impact of bilingual education on academic outcomes, highlighting potential benefits or challenges associated with learning subjects in English. Such comparisons are essential for informing educational strategies aimed at enhancing student achievement and optimizing bilingual education programs to meet the diverse linguistic needs of primary school students in Nigeria.

Table 7. Average Grades in Subjects Taught in English.

Grade Range	Number of Students	Percentage of Students (%)
90–100	40	16
80–89	60	24
70–79	70	28
60–69	50	20
Below 60	30	12
Total	250	100

(3) Questionnaire Item 8: Do you feel that learning in both your native language and English helps you understand the subjects better? Please explain your answer.

Table 8 presents students' perceptions regarding whether learning in both their native language and English enhances their understanding of subjects within bilingual ed-

ucation programs. According to the data, 40% of the students (100 out of 250) responded affirmatively, stating that learning in both languages significantly helps them understand subjects better. An additional 36% of the students (90 out of 250) indicated that learning in both languages contributes to their understanding to some extent. Together, these two categories account for 76% of the students, suggesting a strong positive perception of the benefits of bilingual education in enhancing subject comprehension. Conversely, 12% of the students (30 out of 250) reported feeling that learning in both languages does not really help them understand subjects better, while another 12% (30 out of 250) expressed uncertainty about the impact of bilingual education on their understanding. These responses indicate varying levels of perceived effectiveness and highlight potential areas where additional support or adjustments in instructional strategies may be beneficial. Overall, the majority of students in bilingual education programs perceive a positive correlation between learning in both their native language and English and improved understanding of academic subjects. Their responses emphasize the importance of bilingual education in promoting deeper comprehension and mastery of curriculum content across different linguistic contexts. By addressing students' perceptions and leveraging the perceived benefits of bilingual education, educators can further optimize instructional practices to maximize learning outcomes and support academic success among primary school students in Nigeria.

Table 8. Perception of Learning in Both Native Language and English.

Response	Number of Students	Percentage of Students (%)
Yes, significantly	100	40
Yes, to some extent	90	36
No, not really	30	12
Not sure	30	12
Total	250	100

(4) Questionnaire Item 9: How do you think bilingual education has affected your performance in mathematics and science subjects?

Table 9 summarizes students' perceptions regarding how bilingual education has affected their performance in mathematics and science subjects. According to the data, 44% of the students (110 out of 250) reported that bilingual education has improved their performance in mathematics and science. This indicates a significant proportion of students who believe that learning in both their native language and English has positively influenced their academic achievements in these subjects. On the other hand, 32% of the students (80 out of 250) stated that bilingual education has made no noticeable difference to their performance in mathematics and science. This suggests that while a substantial number of students do not perceive a direct impact, they also do not feel disadvantaged by bilingual instruction. Conversely, 8% of the students (20 out of 250) expressed that their performance in mathematics and science has declined due to bilingual education. This minority opinion highlights a potential area of concern where further investigation into specific challenges or barriers is warranted. Additionally, 16% of the students (40 out of 250) indicated uncertainty about the impact of bilingual education on their performance in mathematics and science. These responses reflect varying perceptions and experiences among students regarding the effectiveness of bilingual education in enhancing their academic achievements in specific subjects. Overall, the data reveal the diverse perceptions of students regarding the impact of bilingual education on their performance in mathematics and science. Educators and policymakers can use these insights to refine bilingual education programs, address challenges, and capitalize on perceived benefits to optimize learning outcomes in mathematics and science subjects for primary school students in Nigeria.

(5) Questionnaire Item 10: In your opinion, what are the benefits and challenges of bilingual education in improving your academic performance?

Table 9. Perception of Bilingual Education's Impact on Mathematics and Science Performance.

Response	Number of Students	Percentage of Students (%)
Improved	110	44
No difference	80	32
Declined	20	8
Not sure	40	16
Total	250	100

Table 10 summarizes students' opinions regarding the benefits and challenges of bilingual education in improving their academic performance. According to the data, 60% of the students (150 out of 250) identified benefits associated with bilingual education. These benefits may include enhanced language proficiency, improved cognitive abilities, broader cultural understanding, and increased academic opportunities. Students perceive bilingual education as contributing positively to their overall academic growth and development. Conversely, 40% of the students (100 out of 250) reported facing challenges associated with bilingual education. These challenges may include difficulties in mastering two languages simultaneously, potential confusion in academic concepts presented in different languages, varying proficiency levels in each language, and the additional cognitive load required for language switching during learning activities. The distribution of responses reflects a balanced view among students regarding the advantages and obstacles of bilingual education. While a majority acknowledges the benefits, a significant minority also recognizes the challenges inherent in navigating a bilingual learning environment. These insights are valuable for educators and policymakers aiming to optimize bilingual education programs. By addressing perceived challenges and leveraging identified benefits, educators can implement strategies to maximize the positive impact of bilingual education on students' academic performance. This includes providing adequate support for language development, promoting cultural awareness, and fostering an inclusive learning environment that accommodates diverse linguistic backgrounds.

Table 10. Perceptions of Benefits and Challenges of Bilingual Education.

Category	Number of Students	Percentage of Students (%)
Benefits	150	60
Challenges	100	40
Total	250	100

5. Discussion

The present study investigated the impact of bilingual education programs on the language proficiency and academic performance of primary school students in Nigeria. The data collected from 250 students across five primary schools provided insights into various aspects of bilingual education, including students' confidence in using their native language and English, the frequency of language use for academic purposes, preferences for the language of instruction, academic performance, and perceptions of the benefits and challenges of bilingual education.

The findings revealed significant differences in students' confidence in using their native language and English. Approximately 60% of the students reported feeling confident to very confident in speaking their native language in classroom settings, while 58% expressed similar confidence in using English. This suggests that bilingual education programs are effective in fostering language proficiency in both languages, though slight variations in confidence levels highlight the need for targeted support to bolster students' confidence in each language. The frequency of language use for academic purposes further emphasizes the role of bilingual education in promoting balanced language proficiency. A majority of students reported using their native language and English often or very often for academic tasks such as reading, writing, and discussions. Specifically, 56% of the students frequently used their native language, and 68% frequently used English for academic purposes. This frequent

use of both languages indicates that bilingual programs encourage active engagement with both languages in academic contexts, which is essential for developing proficiency.

The study also examined the impact of bilingual education on academic performance, particularly in subjects taught in the native language and English. The data showed varied academic achievements among students, with notable percentages performing well in both language contexts. In subjects taught in the native language, 60% of students scored above 70, while in subjects taught in English, 68% scored above 70. These results suggest that bilingual education does not hinder academic performance; rather, it supports students in achieving competence in both languages. However, a minority of students reported lower performance levels, particularly in subjects taught in their native language. This variation may be attributed to factors such as the quality of instruction, students' initial language proficiency levels, and the availability of resources in each language. The findings highlight the importance of providing adequate instructional support and resources to ensure that all students can benefit equally from bilingual education.

Students' perceptions of bilingual education were largely positive, with 76% indicating that learning in both their native language and English helps them understand subjects better. This perception aligns with research suggesting that bilingual education can enhance cognitive flexibility, metalinguistic awareness, and academic achievement. The ability to draw on knowledge from two languages may facilitate deeper understanding and retention of academic content. Moreover, 44% of students reported that bilingual education improved their performance in mathematics and science, while 32% saw no significant difference, and 8% felt their performance had declined. These mixed perceptions indicate that while many students benefit academically from bilingual education, there are also challenges that need to be addressed to ensure consistent positive outcomes across all subjects.

The study identified both benefits and challenges associated with bilingual education. A majority of students (60%) recognized the benefits, including enhanced language skills, better cognitive abilities, and increased cultural awareness. These benefits align with existing literature on the advantages of bilingual education, which highlights improved executive function, greater cultural competence, and expanded future opportunities for bilingual individuals. However, 40% of students reported challenges, such as difficulty in mastering two languages, potential confusion in academic concepts, and additional cognitive load. These challenges are consistent with findings from other studies that emphasize the need for well-designed bilingual programs that provide sufficient linguistic and cognitive support. Addressing these challenges requires a dynamic approach, including differentiated instruction, targeted language interventions, and professional development for teachers to effectively manage bilingual classrooms.

The findings of this study have several implications for educators and policymakers. Firstly, there is a need to ensure that bilingual education programs are well-structured and adequately resourced to support students in both languages. This includes providing high-quality instructional materials, ongoing teacher training, and access to language development resources. Secondly, the study highlights the importance of monitoring and addressing individual student needs within bilingual programs. Differentiated instruction and targeted support can help bridge gaps in language proficiency and academic performance, ensuring that all students can benefit from bilingual education. Finally, the positive perceptions of bilingual education among students suggest that such programs can play a crucial role in promoting linguistic and academic development. Policymakers should consider the broader implementation of bilingual education programs, particularly in multilingual contexts like Nigeria, where such programs can foster greater linguistic diversity and academic success.

In a nutshell, the study demonstrates that bilingual education programs have a positive impact on the language proficiency and academic performance of primary school students in Nigeria. While there are challenges to be addressed, the benefits of bilingual education, including enhanced language skills, cognitive abilities, and cultural awareness, are significant. By providing adequate support and resources, educators and policymakers can optimize bilingual education programs to ensure that all students can achieve their full potential in both their native language and English.

6. Conclusions

This study found that bilingual education programs significantly enhance the language proficiency and academic performance of primary school students in Nigeria. The

findings indicate that a majority of students benefit from the dual-language approach, exhibiting high confidence levels in both their native language and English, and performing well academically in subjects taught in both languages. However, the study also highlighted challenges such as difficulty in mastering two languages simultaneously and the cognitive load associated with bilingual learning. To address these challenges, it is recommended that educators and policymakers provide targeted support, including differentiated instruction and professional development for teachers. Additionally, enhancing resources and instructional materials in both languages can help bridge gaps in proficiency and performance. Continuous monitoring and evaluation of bilingual programs are essential to ensure they meet the diverse needs of students. Policymakers should consider expanding bilingual education initiatives to foster greater linguistic and academic success, particularly in multilingual contexts. By leveraging the strengths of bilingual education and addressing its challenges, educators can create more inclusive and effective learning environments that support the holistic development of all students. This approach will not only improve individual academic outcomes but also contribute to the broader goals of cultural competence and cognitive development in Nigeria's educational setting.

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Conflicts of Interest

The author declares no conflict of interest.

References

[1] Cummins, J., 2000. Language, Power, and Pedagogy: Bilingual Children in the Crossfire. Multilingual Matters: Bristol, UK. pp. 57–86.

[2] Garcia, O., 2009. Bilingual Education in the 21st Century: A Global Perspective. Wiley-Blackwell: Hoboken, NJ, USA. p. 200.

[3] Jegede, O.O., 2024. Language ideologies and attitudes as challenges of the Nigerian language of instruction policy. Lonaka Journal of Learning and Teaching. 13(1), 1–15.

[4] Bamgbose, A., 2011. African Languages Today: The Challenge of and Prospects for Empowerment under Globalization. Selected Proceedings of the 40th Annual Conference on African Linguistics. 1(1), 1–14.

[5] Adegbija, E., 2004. Language Policy and Planning in Nigeria. Current Issues in Language Planning. 5(3), 181–246.

[6] Igboanusi, H., Putz, M., 2008. The Future of African Languages. Language Problems and Language Planning. 32(2), 147–178.

[7] Thomas, W.P., Collier, V.P., 2002. A National Study of School Effectiveness for Language Minority Students' Long-Term Academic Achievement. Available from: https://escholarship.org/uc/item/65j213pt (cited 6 December 2024).

[8] Collier, V.P., Thomas, W.P., 2004. The Astounding Effectiveness of Dual Language Education for All. NABE Journal of Research and Practice. 2(1), 1–20.

[9] Genesee, F., 2004. What Do We Know About Bilingual Education for Majority Language Students? In: Bhatia, T.K., Ritchie, W.C. (eds.). The Handbook of Bilingualism. Wiley-Blackwell: Hoboken, NJ, USA. pp. 547–576.

[10] Freeman, R., 2004. Building on Community Bilingualism. Caslon Publishing: Philadelphia, PA, USA. pp. 50–55.

[11] Bialystok, E., 2011. Reshaping the Mind: The Benefits of Bilingualism. Canadian Journal of Experimental Psychology/Revue canadienne de psychologie expérimentale. 65(4), 229–235.

[12] Afolayan, A., 2016. The Language Question in Nigeria: Paradigms, Policies and Politics. In: Adegbija, E. (eds.). Language in Exile: Towards a Language Pedagogy for African Learners. Routledge: London, UK. pp. 155–178.

[13] Ajayi, L., 2019. Bilingual Education in Nigeria: Gains and Challenges. Journal of Multilingual and Multicultural Development. 40(7), 632–647.

[14] Jegede, O.O., 2011. Code Switching and Its Implications for Teaching Mathematics in Primary Schools in Ile-Ife, Nigeria. Journal of Education and Practice. 2(10), 41–54.

[15] Jegede, O.O., 2012. Roles of Code Switching in Multilingual Public Primary Schools in Ile-Ife. American Journal of Linguistics. 1(3), 40–46.

[16] Jegede, O.O., Adetuyi, C.A., 2016. Language-in-Education Policy in Nigeria: The Reality of Teachers' Language Choices. Journal of Capital Development on Behavioural Sciences. 4(1), 1–18.

[17] Igboanusi, H., 2008. Mother Tongue-Based Bilingual Education in Nigeria: Attitudes and Challenges. Language, Culture and Curriculum. 21(2), 117–125.

[18] Ogunnaike, O., Dunham, Y., 2018. The Impact of Bilingualism on Cognitive Development in Nigeria. International Journal of Bilingual Education and Bilingualism. 21(8), 917–930.

[19] Jegede, O.O., Yusuf, O.M., Aliyu, A., 2024. Inclusive Education in the 21st Century: Solving the Language of Instruction Puzzle in Nigerian Public Primary Schools. In: Adeyemi, A.F., Yara, P.O., Oyelami, O., Bakare-Fatungase, O. (eds.). Inclusive Education in the 21st Century: A Festschrift in Honour of an Erudite Scholar, Rev. Dr. (Mrs) Oluwatoyin Abike Odeleye. College Press: Ibadan, Nigeria. pp. 147–157.

[20] Tollefson, J.W., Tsui, A.B.M., 2004. Medium of Instruction Policies: Which Agenda? Whose Agenda? Lawrence Erlbaum Associates: Mahwah, NJ, USA. pp. 40, 74.

[21] Jegede, O.O., Adesina, O.B., 2020. Code Switching as a Medium of Instruction in Basic Schools in Osun and Oyo States, Nigeria. Journal of English and Communication in Africa. 3(1–2), 33–70.

[22] Bialystok, E., 2001. Bilingualism in Development: Language, Literacy, and Cognition. Cambridge University Press: Cambridge, UK. p. 92.

[23] Bialystok, E., 2009. Bilingualism: The Good, the Bad, and the Indifferent. Bilingualism: Language and Cognition. 12(1), 3–11.

[24] Adesope, O.O., Lavin, T., Thompson, T., et al., 2010. A Systematic Review and Meta-Analysis of the Cognitive Correlates of Bilingualism. Review of Educational Research. 80(2), 207–245.

[25] Kroll, J.F., Bialystok, E., 2013. Understanding the Consequences of Bilingualism for Language Processing and Cognition. Journal of Cognitive Psychology. 25(5), 497–514.

[26] Mechelli, A., Crinion, J.T., Noppeney, U., et al., 2004. Neurolinguistics: Structural Plasticity in the Bilingual Brain. Nature. 431(7010), 757.

[27] Vygotsky, L.S., 1978. Mind in Society: The Development of Higher Psychological Processes. Harvard University Press: Cambridge, MA, USA. p. 24.

[28] Norton, B., 2013. Identity and Language Learning: Extending the Conversation. Multilingual Matters: Bristol, UK. p. 19.

[29] Lantolf, J.P., Thorne, S.L., 2006. Sociocultural Theory and the Genesis of Second Language Development. Oxford University Press: Oxford, UK. p. 44.

[30] Garcia, O., Kleifgen, J.A., 2010. Educating Emergent Bilinguals: Policies, Programs, and Practices for English Language Learners. Teachers College Press: New York, NY, USA. p. 70.

[31] Hammer, C.S., Lawrence, F.R., Miccio, A.W., 2012. Bilingual Children's Language Abilities and Early Reading Outcomes in Head Start and Kindergarten. American Journal of Speech-Language Pathology. 16(4), 248–260.

[32] De Houwer, A., 2009. Bilingual First Language Acquisition. Multilingual Matters: Bristol, UK. p. 112.

[33] Paradis, J., 2011. Individual Differences in Child English Second Language Acquisition: Comparing Child-Internal and Child-External Factors. Linguistic Approaches to Bilingualism. 1(3), 213–237.

[34] Valdés, G., Figueroa, R.A., 1994. Bilingualism and Testing: A Special Case of Bias. Ablex Publishing Corporation: New York, NY, USA. p. 44.

[35] Lantolf, J.P., Poehner, M.E., 2014. Sociocultural Theory and the Pedagogical Imperative in L2 Education: Vygotskian Praxis and the Research/Practice Divide. Routledge: London, UK. p. 62.

[36] Genesee, F., Upshur, J.A., 1996. Classroom-Based Evaluation in Second Language Education. Cambridge University Press: Cambridge, UK. pp. 19, 90.

[37] Gándara, P., Escamilla, K., 2017. Bilingual Education in the United States. In: Wright, W.E., Boun, S., García, O. (eds.). The Handbook of Bilingual and Multilingual Education. Wiley-Blackwell: Hoboken, NJ, USA. pp. 449–462.

[38] Hornberger, N.H., Link, H., 2012. Translanguaging in Today's Classrooms: A Biliteracy Lens. Theory Into Practice. 51(4), 239–247.