

Institutional Factors Influencing Bilingual Education: A Primary School Perspective from Ghana

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ABSTRACT

This study examines the institutional factors influencing the effectiveness of bilingual education in primary schools within the Ledzokuku Municipality of Accra, Ghana. This study uses a mixed methods approach, and the research explores the interplay between teacher training, resource availability, administrative support, and community involvement in the success of bilingual education programs. A case study at Adom Primary School provides in-depth insights into the experiences of educators, administrators, and parents, while a survey of 200 educators and administrators offers a broader perspective. Qualitative findings emphasize the need for comprehensive teacher training and the critical role of community support in supplementing school resources. Teachers desire more extensive training to deliver instruction confidently in a second language. The case study reveals the significant impact of community involvement in overcoming resource limitations, suggesting local engagement as a strategic asset for bilingual education. Quantitative results corroborate these insights, showing significant positive correlations between teacher training hours, resource availability, and program effectiveness. Regression analysis indicates that teacher training and resource availability are significant predictors of program effectiveness, underscoring the need for targeted investments in these areas. The study identifies challenges such as a shortage of qualified bilingual teachers, resource scarcity, and the complexity of aligning language policies with community expectations. Recommendations include developing robust teacher training programs, increasing resource allocation, and fostering community-school partnerships. This research contributes to the literature by providing a nuanced understanding of the institutional factors impacting bilingual education in a Ghanaian context, with implications for educational policy and practice.

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1. INTRODUCTION

Bilingual education, a cornerstone of linguistic and cultural diversity, has garnered considerable attention for its potential to equip students with the skills necessary to navigate an increasingly globalized world (Barrios & Milla Lara, 2020). The benefits of bilingualism extend beyond communication, with research highlighting cognitive advantages such as enhanced problem-solving and multitasking abilities (Bialystok, 2017). In the context of Ghana, a nation rich in linguistic heritage with over 80 distinct languages spoken (Cortés-Pascual et al., 2023), bilingual education becomes an educational strategy and a means to preserve and promote cultural identity. However, implementing bilingual

education in Ghanaian primary schools is fraught with challenges (Henderson & Palmer, 2020). A pervasive issue is the dearth of educators who are adequately trained to teach in a bilingual context (Lo, 2021).

Furthermore, schools often grapple with limited resources, including a scarcity of bilingual teaching materials and technology, which can significantly hinder the effectiveness of bilingual programs (Banaruee et al., 2023; García & Kleifgen, 2018). The lack of clear language policies and the absence of community support further exacerbate these challenges (May, 2019). This study seeks to investigate the institutional factors that influence the effectiveness of bilingual education in Ghanaian primary schools, with a focus on teacher training, resource availability, administrative support, and community involvement. By employing a mixed-methods approach, which includes a qualitative case study at Adom Primary School and a quantitative survey of educators and administrators, this research aims to provide a comprehensive understanding of the systemic factors that can either facilitate or impede bilingual education. The significance of this study lies in its potential to inform educational policy and practice, offering insights that can lead to the development of more effective bilingual education programs in Ghana. The findings may also resonate with other contexts where bilingual education is being implemented, providing a framework for cross-cultural understanding and application. The literature review that follows examines the existing research on bilingual education, institutional factors, and their interplay in the Ghanaian context. It provides a theoretical foundation for the study, which is then followed by a description of the mixed-methods design, detailing the qualitative and quantitative approaches used to collect and analyze data.

The pursuit of bilingual education in Ghanaian primary schools, while promising cognitive and cultural development of students, is beset with a myriad of challenges that impede its effectiveness. At the heart of these challenges is the dearth of adequately trained bilingual educators. Research indicates that teachers' proficiency in both the native/official and second languages, coupled with specialized pedagogical training, is crucial for the success of bilingual programs (Lo, 2021). However, many educators in Ghanaian schools find themselves ill-equipped to navigate the complexities of bilingual instruction, particularly in areas where access to professional development is limited (Cummins & Early, 2019). Compounding this issue is the scarcity of resources, with schools often lacking essential bilingual teaching materials and technology (García & Kleifgen, 2018). This resource gap disproportionately affects underprivileged areas, perpetuating a cycle of educational disadvantage and undermining the potential of bilingual education to act as a great equalizer.

Furthermore, language policies that do not take into account linguistic diversity and community needs can lead to a misalignment between bilingual education programs and the cultural contexts in which they are embedded (May, 2019). The lack of community involvement and support is another significant barrier. When communities are not engaged in the educational process, there is a risk that bilingual programs will not be adequately understood or valued, a situation that can lead to resistance or apathy (Genesee, 2018). Moreover, the absence of robust assessment and evaluation mechanisms makes it difficult to measure the success of bilingual initiatives and to identify areas for improvement (Lin & Martin, 2019). Addressing these challenges is of paramount importance for several

reasons. Bilingual education has the potential to enhance cognitive flexibility and cultural awareness, providing learners with a competitive edge in an increasingly globalized world (Bialystok, 2017).

Moreover, by providing equitable access to bilingual education, schools can help to bridge socio-economic divides and empower learners from all backgrounds. The success of bilingual education in Ghanaian primary schools is not just an educational imperative but also a key component in the nation's broader efforts to improve educational outcomes and prepare its youth for future challenges. The objectives of this study are to examine the current state of bilingual education in Ghanaian primary schools, to identify the institutional factors that influence its effectiveness, and to propose strategies for overcoming the identified challenges.

In order to achieve the objectives of this research, the following research questions are investigated:

1. What institutional factors promote the effectiveness of bilingual education in Ghanaian primary schools?
2. What barriers impede the implementation of bilingual education in Ghanaian primary schools?
3. What strategies can be employed to overcome the identified institutional barriers?

The findings address a critical gap in the literature by providing an in-depth examination of the systemic challenges and potential solutions within Ghana's educational system. As bilingual education becomes increasingly recognized for its cognitive and cultural benefits, understanding the factors that contribute to its success or failure is essential for informed policymaking (Bialystok, 2017). The findings from the study have direct implications for educational practices, offering insights into how teacher training programs can be improved to better prepare educators for the complexities of bilingual instruction (Lo, 2021). By highlighting the importance of resource allocation and the role of community involvement, the study also underscores the need for a collaborative approach to education that engages stakeholders beyond the school's walls (Genesee, 2018). The study is further structured as follows: Section 1 presents an introduction of the study; literature review in Section 2; while sections 3, 4, 5, 6, and 7 present the theoretical foundation, methodology, findings, discussion, and conclusion respectfully.

2. LITERATURE REVIEW

2.1 Bilingual Education

Bilingual education has been the subject of extensive research, with numerous studies examining its effects on cognitive development, academic achievement, and cultural identity. A review of the literature reveals several key themes and findings that contribute to our understanding of bilingual education. One of the most consistent findings across studies is the cognitive advantage associated with bilingualism. Research has shown that bilingual individuals tend to perform better on tasks requiring executive control, such as switching between tasks or ignoring irrelevant information (Bialystok, 2017). This cognitive flexibility is thought to result from the continuous need to manage two languages, leading to enhanced inhibitory control and mental flexibility (Blom &

Korostelina, 2020). Academically bilingual education has been linked to higher academic achievement, particularly in subjects that are not language-dependent (Genesee, 2018).

However, the relationship between bilingual education and academic performance is complex and can be influenced by various factors, such as the quality of instruction, the language of instruction, and the socio-economic background of learners (Lin & Martin, 2019). The social and cultural aspects of bilingual education are also well-documented. Bilingual education is seen as a means to preserve and promote linguistic and cultural diversity (May, 2019). It can foster a sense of identity and belonging among learners from minority language backgrounds (García & Kleifgen, 2018). Moreover, bilingual education can contribute to the development of intercultural competence, equipping learners with the skills to navigate diverse social and cultural contexts (Lo, 2021). Despite the potential benefits, bilingual education faces several challenges. One of the main challenges is the shortage of qualified bilingual educators (Lo, 2021). Teachers need to be proficient in both languages and possess the pedagogical skills to teach effectively in a bilingual context.

Another challenge is the resistance from some communities and policymakers, who may perceive bilingual education as a threat to national unity or as a hindrance to academic achievement in the majority language (May, 2019). The effectiveness of bilingual education programs also depends on the language policies and practices in schools. Studies have shown that additive bilingual education models, where both the native language and a second language are used and valued, tend to be more effective than subtractive models, where the native language is replaced by a second language (Cummins & Early, 2019). The choice of language of instruction is another critical factor, with research suggesting that teaching in the native language can support academic achievement and cognitive development (Baker, 2011). In terms of research methodology, most studies on bilingual education have employed quantitative or qualitative approaches, with some using mixed-methods designs (Lin & Martin, 2019). Longitudinal studies are relatively scarce, but they are essential for understanding the long-term effects of bilingual education on cognitive, academic, and social outcomes (Blom & Korostelina, 2020). More research is also needed on the implementation of bilingual education in different educational contexts, such as early childhood education, higher education, and vocational training.

2. 2 Institutional Factors in Bilingual Education

Institutional factors play a pivotal role in shaping the landscape of bilingual education within schools. These factors encompass a range of elements, including school policies, teacher training, resource allocation, and administrative support, all of which can significantly impact the success of bilingual initiatives (García & Kleifgen, 2018). A review of recent literature reveals that the multifaceted nature of these institutional influences underscores their importance in the context of bilingual education. One of the most critical institutional factors is teacher training. Educators who are well-trained in bilingual pedagogy are better equipped to implement effective instructional strategies, leading to improved learner outcomes (Lo, 2021). Studies have shown that professional development opportunities focused on bilingual education can enhance teachers' language proficiency, cultural understanding, and pedagogical skills (Lin, 2020).

However, a persistent challenge is the shortage of proficient instructors in both the native language and the language of instruction (Cummins & Early, 2019). This shortage

can be exacerbated in regions where bilingual education is a recent policy initiative, and there has not been sufficient time to train a workforce of bilingual educators (May, 2019). Resource allocation is another institutional factor that can make or break a bilingual education program. Adequate resources are essential for the provision of materials, technology, and support staff necessary for effective bilingual instruction (Genesee, 2018).

However, many schools, particularly those in underprivileged areas, struggle with limited resources, which can hinder the implementation of bilingual programs (Abadi, 2022). The lack of resources can lead to large class sizes, outdated materials, and insufficient support for teachers, all of which can negatively impact the quality of bilingual education (García & Kleifgen, 2018). School policies also play a significant role in bilingual education. Policies that support the use of both the native language and the second language in instruction can create an additive bilingual environment where learners develop proficiency in both languages (Cummins & Early, 2019). In contrast, policies that favor the second language at the expense of the native language can lead to a subtractive bilingual context model, where the native language is marginalized, and learners may experience a loss of cultural identity (May, 2019). The choice of language of instruction is a critical aspect of these policies, with research suggesting that instruction in the native language can support academic achievement and cognitive development (Baker, 2011).

Administrative support is another key institutional factor. Principals and other school leaders who are committed to bilingual education can provide the necessary support and resources for these programs to succeed (Lin & Martin, 2019). This support can take various forms, such as building advocacy for additional funding, providing professional development opportunities, and fostering a school culture that values bilingualism (Lo, 2021). However, a lack of administrative support can hinder the implementation of bilingual programs, even when there is a policy mandate to do so (Bialystok, 2017). Community involvement is an often overlooked institutional factor that can significantly impact bilingual education. Parents and community members who are engaged in the education process can provide valuable support for bilingual programs (García & Kleifgen, 2018). This support can come in the form of volunteering, fundraising, and advocacy for bilingual education at the local and national levels (Abadi, 2022).

However, a lack of community understanding or support for bilingual education can create challenges for these programs, particularly when there is resistance to the use of a particular language in schools (Dörnyei, 2013). In conclusion, institutional factors are critical in determining the success of bilingual education programs. Teacher training, resource allocation, school policies, administrative support, and community involvement play a role in shaping the implementation and effectiveness of bilingual education (Navarro, 2023). While there are challenges associated with these institutional factors, there are also opportunities to enhance bilingual education through targeted interventions and policy changes (Rideout, 2014; García, 2019). Further research is needed to explore the specific ways in which these institutional factors influence bilingual education in different contexts and to identify best practices for addressing the challenges associated with these factors.

2.3 Challenges and Barriers to Bilingual Education

The existence of bilingual education, although it has the potential to improve cognitive development and cultural understanding, encounters several challenges and barriers that can affect its success (Cortés-Pascual et al., 2023). A significant barrier is the scarcity of qualified bilingual teachers (Genesee, 2018). Research consistently indicates that teachers who are proficient in both the native and second languages and who are trained in pedagogical strategies suitable for bilingual settings are essential for the effectiveness of bilingual programs (García & Kleifgen, 2018; Cummins & Early, 2019). However, many schools struggle to recruit and retain such teachers, particularly in regions where bilingual education is a recent initiative or in areas with limited resources (Cummins & Early, 2019). Another challenge is the lack of adequate resources, which can include teaching materials, technology, and funding. Bilingual education often requires specialized materials that are not always readily available or affordable, which can hinder the quality of instruction (García & Kleifgen, 2018).

Furthermore, the absence of clear policies and support from educational authorities can create an environment where bilingual programs are not given the priority they require (Dinevich, 2021). Language policy and community attitudes also pose significant barriers. In some communities, there may be resistance to bilingual education due to concerns about the maintenance of the native language or the perceived threat to cultural identity (Baker, 2011). This resistance can manifest in political or social pressures that undermine bilingual initiatives. Additionally, the choice of the language of instruction is a critical policy decision that can influence parental support and student engagement (Genesee, 2018). The assessment and evaluation of bilingual programs present further challenges. There is a need for valid and reliable measures that can accurately assess language proficiency and academic achievement in both languages.

However, the development of such assessment tools is complex and must take into account the diverse linguistic and educational backgrounds of learners (Lin & Martin, 2019). Finally, the professional development of in-service teachers is an ongoing challenge. As bilingual education evolves, teachers need ongoing support and training to keep up with new research findings, pedagogical strategies, and language teaching techniques (Lo, 2021). Without such opportunities for continuous learning, teachers may struggle to meet the needs of their bilingual learners (Lin, 2020; Alanen, 2003). In conclusion, while bilingual education holds great promise, it faces numerous challenges and barriers that require thoughtful and strategic solutions. Addressing these issues requires a concerted effort from educators, policymakers, and communities to ensure that bilingual programs can thrive and provide learners with the linguistic and cultural competencies necessary for success in our globalized world.

3. THEORETICAL FOUNDATION: INSTITUTIONAL THEORY

In this study, we employ institutional theory as the primary framework to understand the complex dynamics influencing bilingual education in primary schools. Institutional theory, developed by scholars such as John Meyer and Brian Rowan in the late 1970s and further advanced by Richard Scott, offers a comprehensive lens to examine how formal structures, regulatory frameworks, and social norms shape organizational behavior and

outcomes (Meyer & Rowan, 1977; Scott, 2008). This theory is particularly relevant for our research as it provides insights into how educational institutions operate within broader socio-cultural and political contexts. Institutional theory posits that organizations are deeply embedded in an institutional environment comprising regulatory, normative, and cultural-cognitive elements. These elements collectively influence organizational practices and outcomes (Scott, 2008). In the context of bilingual education, these factors manifest in several ways, impacting the effectiveness of bilingual programs in primary schools. Regulatory elements include policies and regulations established by educational authorities that guide the implementation of bilingual education programs. These regulations create a formal structure within which schools operate, dictating resource allocation, curriculum standards, and teacher qualifications. For instance, policies mandating the inclusion of bilingual education ensure that schools receive the necessary attention and resources to implement these programs effectively (UNESCO, 2020; García & Kleifgen, 2018).

Normative elements encompass the values, norms, and expectations that shape individual and organizational behavior. In bilingual education, societal attitudes towards bilingualism and the perceived value of learning multiple languages play a critical role. Normative pressures can influence the level of community support for bilingual programs and the willingness of parents to enroll their children in such initiatives (May, 2019; Cummins & Early, 2019). Cultural-cognitive elements involve shared beliefs and understandings that shape how individuals perceive and respond to their environment. In the realm of bilingual education, these beliefs include perceptions about the cognitive benefits of bilingualism and the role of language in cultural identity (Bialystok, 2017; Lin, 2020).

These cultural-cognitive elements influence how teachers and students engage with bilingual education programs and how communities perceive their importance. We selected institutional theory for this study because it offers a robust framework for understanding the multifaceted influences on bilingual education. By examining regulatory, normative, and cultural-cognitive elements, the institutional theory allows us to comprehensively analyze how various institutional factors—such as teacher training, resource allocation, administrative support, and community involvement—affect the effectiveness of bilingual education programs. This theoretical approach helps us identify the structural components of bilingual education and the social and cultural dynamics that shape these programs.

Institutional theory has been widely used in language and education literature to explore how institutional environments impact educational practices and outcomes. For example, García and Kleifgen (2018) utilized institutional theory to examine policies and practices affecting emergent bilinguals in the United States. Their research highlighted how regulatory frameworks and normative pressures shape the implementation of bilingual education programs. Similarly, May (2019) employed institutional theory to investigate the socio-political contexts influencing language education policies and practices, demonstrating how cultural-cognitive elements affect educational outcomes.

Furthermore, Lin (2020) applied institutional theory to analyze the global practices and policies of bilingual education, illustrating how different countries' regulatory and normative environments impact the effectiveness of bilingual programs. These studies

underscore the utility of institutional theory in providing a nuanced understanding of the interplay between institutional factors and educational practices. In conclusion, by employing institutional theory, we gain a comprehensive framework to explore how various institutional factors influence bilingual education in primary schools. This theoretical approach allows us to analyze the regulatory, normative, and cultural-cognitive elements that shape the implementation and effectiveness of bilingual education programs, providing valuable insights for educational policy and practice.

4. RESEARCH METHODOLOGY

The complexity of institutional factors influencing bilingual education in primary schools necessitates a nuanced understanding that can be achieved through a mixed-methods approach. This methodology allows for a comprehensive exploration of the topic, combining the depth of qualitative inquiry with the breadth of quantitative data collection (Creswell & Creswell, 2017). The qualitative component will provide insights into the experiences and perspectives of various stakeholders, including educators, administrators, and policymakers, while the quantitative aspect will offer statistical evidence to support the findings (Johnson & Onwuegbuzie, 2004). This dual perspective is essential for a well-rounded analysis of the institutional factors at play in bilingual education within Ghanaian primary schools.

4.1 Research Design

The research design for this study is a sequential mixed-methods approach, where qualitative data collection is followed by quantitative data collection. This design enables the researcher to first explore the research problem in-depth through qualitative means and then to generalize the findings using quantitative methods (Creswell, 2014). The qualitative phase involves semi-structured interviews and observations to capture the richness of the participant's experiences and the contextual factors influencing bilingual education. Following the qualitative exploration, a survey questionnaire will be administered to a broader sample to gather quantitative data that can be statistically analyzed to identify patterns and trends across the sampled primary schools in Ghana. The sequential design is chosen to capitalize on the strengths of both qualitative and quantitative research methods. The initial qualitative phase allows for the generation of hypotheses, which are then tested through the quantitative phase (Tashakkori & Teddlie, 2010). This approach not only enriches the understanding of the research problem but also provides a more reliable basis for the development of recommendations and strategies to address the identified institutional barriers.

4.2 Scope of the Study

This study's scope is intentionally focused on providing an in-depth analysis of the institutional factors affecting bilingual education within a specific context. The research is centered on primary schools in the Ledzokuku Municipality, a district within the Greater Accra Region of Ghana. This geographical focus allows for an intensive exploration of the local dynamics that influence bilingual education while also acknowledging the diversity that exists across different regions of the country (Lo, 2021). The study encompasses a range of institutional factors, including teacher training, resource availability, administrative support, and community involvement. It aims to understand how these

factors interact and contribute to the effectiveness of bilingual education programs. By focusing on these areas, the research provides targeted insights that can inform policy and practice within the education sector (García & Kleifgen, 2018). The methodology adopted for this study includes both qualitative and quantitative approaches. The qualitative component, in the form of a case study at Adom Primary School, offers a nuanced perspective on the experiences and challenges faced by educators, administrators, and other stakeholders.

The quantitative element, through a survey of educators and administrators across a sample of schools, provides statistical data that can be generalized to a broader population (Creswell & Creswell, 2017). However, the scope of this study is limited to the current state of bilingual education and does not extend to historical analyses or predictions of future trends. Additionally, while the study examines the perceptions and experiences of educators and administrators, it does not extensively explore the viewpoints of students, parents, or community members. Their perspectives could offer a more comprehensive understanding of bilingual education and are an area recommended for future research (May, 2019). The study also does not delve into the specific pedagogical methods or curriculum content of bilingual education programs.

Instead, it takes a broader view of the institutional context in which these programs operate. Furthermore, the research is confined to the present time and does not include a longitudinal perspective, which could provide insights into the long-term impact of institutional factors on bilingual education outcomes (Foster & Cone, 2019). In terms of language policy, the study examines the general policies that affect bilingual education but does not critique or recommend specific policy changes. This area, too, presents an opportunity for further research that could influence policy development. By defining the scope in this manner, the study provides a focused and detailed examination of the institutional factors influencing bilingual education in Ghanaian primary schools. The findings, while specific to the Ledzokuku Municipality, offer insights that can inform broader discussions and future research on bilingual education within Ghana and potentially other multilingual contexts.

4.3 Sample and Sampling Method

The target population for this study comprises primary schools within the Ledzokuku Municipality, Accra. The final sample will include a purposeful selection of schools that represent a range of institutional characteristics, such as size, resources, and student demographics. Participants will consist of educators, school administrators, language specialists, and district education officers actively involved in bilingual education programs. Additionally, a select group of students/learners will be included to provide a student perspective on the bilingual education experience. A stratified random sampling technique will be employed to achieve a representative sample. This method ensures that key strata, such as urban and peri-urban schools, are proportionately represented in the sample (Babbie, 2016). Stratification will be based on school location, resource availability, and student population size. Schools will be categorized into strata based on pre-defined criteria. A random selection of schools will then be made from each stratum.

From the selected schools, individuals to be included as participants will be identified through a combination of snowball and purposive sampling. Snowball sampling

will be used to identify additional participants who are closely connected to the bilingual education process but may not be initially identified through school records (Patton, 2015). Purposive sampling will be employed to ensure the inclusion of participants with specific insights or experiences relevant to the research objectives. The sample size will be determined based on the depth of information required for a comprehensive analysis and the practical constraints of data collection. A preliminary power analysis will be conducted to estimate the appropriate sample size for the quantitative phase of the study (Cohen, 1988). For the qualitative phase, data collection continued until thematic saturation was reached, where no new themes emerged from the data (Guest, Bunce, & Johnson, 2006).

4.4 Study Setting

The study is conducted within the Ledzokuku Municipality, a district in the Greater Accra Region of Ghana. This area was selected for its diverse educational landscape and its representation of both urban and peri-urban characteristics, providing a microcosm of the broader educational context within the region (Ghana Statistical Service, 2020). The Ledzokuku Municipality is home to a variety of primary schools, ranging from well-established institutions with more resources to those that are less endowed, offering a rich tapestry for examining the institutional factors influencing bilingual education. The choice of this municipality is also influenced by the need to understand the nuances of bilingual education within a community that is actively engaged in local governance and educational policymaking (Ledzokuku Municipal Assembly, 2021).

This active engagement is expected to provide a dynamic context for exploring how institutional factors at the local level can either support or impede the implementation of bilingual education programs. The Ledzokuku Municipality, like many areas in Accra, is also experiencing rapid development and urbanization, which may have implications for educational priorities and the demand for bilingual education to prepare learners for a globalized economy (United Nations, 2018). This setting, thus, offers a unique vantage point from which to examine the interplay between institutional factors and the evolving educational needs within a developing urban context.

4.5 Data Collection Method

The data collection process for this study was meticulously designed to comprehensively and multifacetedly capture the intricate dynamics of institutional factors influencing bilingual education within the primary schools of Ledzokuku Municipality, Accra. Given the layered nature of the research questions, a mixed-methods approach was adopted to allow for both in-depth exploration and broad generalization of findings. In the qualitative domain, the study employed semi-structured interviews and non-participant observations. Semi-structured interviews facilitated open dialogue with educators, administrators, language specialists, and district education officers, inviting them to share their experiences and perspectives on bilingual education. These interviews were guided by a carefully crafted schedule of open-ended questions aimed at probing beyond superficial responses to uncover the nuanced realities of bilingual education implementation (Rubin & Rubin, 2012).

The interview schedule underwent pilot testing with a small group of participants from the target population. Non-participant observations were conducted in selected classrooms and school settings. Observations offered a unique perspective by providing

contextual insights into the day-to-day realities of bilingual education, capturing the subtleties that may not be articulated in interviews (Emerson, Fretz, & Shaw, 2011). The observations were conducted in a non-intrusive manner to understand the educational environment as it naturally unfolded. For the quantitative aspect of the study, a survey questionnaire was administered to a broader sample of educators and administrators.

The questionnaire was developed based on the qualitative findings and existing literature, featuring a mix of close-ended and open-ended questions. Close-ended questions allowed for statistical analysis, while open-ended questions provided an opportunity for participants to elaborate on their experiences (Cohen, Manion, & Morrison, 2011). The questionnaire was also piloted to assess its reliability and validity, ensuring that it effectively measured the intended constructs. Ethical considerations were paramount in the data collection process. Ethical approval was obtained from the relevant institutional review board, and informed consent was secured from all participants. Participants were assured of the confidentiality of their responses and were informed of their rights, including the right to withdraw from the study at any time (British Educational Research Association, 2018). The pilot testing phase was crucial for refining the data collection instruments and process. Feedback from the pilot test was used to make necessary adjustments to the interview schedule and questionnaire, enhancing their clarity, relevance, and effectiveness (Mertens, 2010).

The data collection timeline was carefully planned to minimize disruption and to accommodate the availability of participants. Interviews and observations were scheduled during regular school hours, with alternative times offered to ensure maximum participation. The survey questionnaire was administered in both hard copy and online formats, catering to participant preferences and increasing the likelihood of a high response rate (Dillman, Smyth, & Christian, 2014). Data management was a critical aspect of the research process. All data, whether electronic or paper-based, was securely stored and handled with strict confidentiality. Electronic data was encrypted, and paper-based data was kept in locked files. Participant identifiers were separated from the collected data to ensure anonymity. Member checking was conducted after data collection to verify the accuracy of the interview transcripts and observation field notes.

This process involved presenting selected data back to participants, allowing them to confirm or correct the researcher's interpretations (Lincoln & Guba, 1985). Potential challenges during data collection, such as scheduling conflicts, low response rates, or technological issues, were proactively addressed. Alternative data collection times were offered, and follow-up reminders were sent for the survey. Backup recording equipment was available for interviews to ensure data integrity. In conclusion, the data collection methods and procedures for this study were meticulously planned and executed to ensure a thorough and ethical exploration of the research questions. The mixed-methods approach, combined with a thoughtful and rigorous data collection process, provided a solid foundation for understanding the institutional factors that shape bilingual education in Ghanaian primary schools.

4.6 Data Analysis

The analysis of data in this study was approached to draw meaningful insights into the institutional factors influencing bilingual education in Ghanaian primary schools. For

the qualitative data obtained from semi-structured interviews and non-participant observations, a thematic analysis was conducted from the lens of the institutional theory adopted in this study. It involved the careful coding of textual data and identifying patterns and themes that emerged from the participants' experiences and perspectives (Braun & Clarke, 2006). The qualitative analysis was facilitated using NVivo software, which allowed for the systematic organization, coding, and retrieval of data. Through an iterative process, initial codes were refined into themes, which were then reviewed and defined based on the research questions.

Descriptive statistics were calculated to summarize the participant's responses to the quantitative data collected via the survey questionnaire. The statistical software SPSS was utilized to perform more advanced analyses, such as correlation and regression, to identify significant relationships between variables. A commitment to trustworthiness underpinned the process of data analysis. To ensure the credibility of the qualitative analysis, techniques such as prolonged engagement with the data, peer debriefing, and negative case analysis were employed (Lincoln & Guba, 1985). For the quantitative data, measures were taken to assess the reliability of the survey instrument through a pilot study conducted before the main data collection phase. Throughout the analysis, attention was given to the ethical considerations of handling and interpreting sensitive data. Participants' identities were anonymized, and all data were stored securely by the ethical guidelines provided by the Ghana Education Service and the institutional review board.

5. FINDINGS

5.1 Qualitative Findings

The qualitative analysis in this study provides an in-depth understanding of the experiences and perspectives of various stakeholders (Sun & Yin, 2021) involved in bilingual education at the Adom Primary School within the Ledzokuku Municipality, Accra. Through this analysis, the study addressed the complexities and nuances that quantitative data alone cannot capture, offering a rich narrative that contextualizes the implementation and reception of bilingual education programs. Specifically, the qualitative findings delve into the challenges faced, the strategies employed to overcome these barriers, and the perceived impact on students' learning and development. The qualitative case study approach allows for an exploration of the **research questions (RQs)** from a holistic perspective. It addresses **RQ1** by examining the institutional factors that contribute to the effectiveness of bilingual education, such as teacher training and community involvement. For **RQ2**, the case study sheds light on the barriers impeding the implementation of bilingual education, including resource scarcity and infrastructural limitations. Finally, **RQ3** is addressed by identifying strategies that stakeholders have found effective in navigating these barriers, offering insights into potential solutions that can be implemented more broadly.

5.1.1 Case study: Bilingual Education at random primary school

Adom Primary School stands as a microcosm of the broader educational landscape in the Ledzokuku Municipality. Through the voices of its educators, administrators, learners, and parents, the case study unveils the multifaceted nature

of bilingual education. Mr. Asamoah, a teacher at Adom, shared his sentiments on the professional development opportunities available to educators, stating,

The training was well-intentioned, but it felt more like an introduction than a comprehensive preparation for the challenges ahead.

Mrs Agyemang, the headmistress, highlighted the resource constraints that the school grapples with, particularly the lack of bilingual teaching materials. She expressed,

We do our best with what we have, but it's a constant struggle to provide the level of instruction our students deserve.

However, the narrative is not solely defined by challenges. Miss Opoku, a proactive member of the school's Parent-Teacher Association, spoke about the community's collective efforts to support the school,

Our community has always believed in the power of education. We've organized fundraisers and even started a small library with donated books to help our children learn.

The students themselves, like Ama, conveyed their enthusiasm and commitment to learning a second language,

It's not always easy, but I love being able to speak another language. It makes me feel proud and connected to a bigger world.

The case of Adom Primary School reveals experiences that are both unique and reflective of the broader context within which bilingual education operates. It underscores the importance of teacher training, the impact of resource scarcity, and the potential of community support as a driving force for educational success.

5.2 Quantitative Findings

Following the in-depth exploration of bilingual education at Adom Primary School through qualitative means, the study also employed quantitative methods to gather data from a wider sample of primary schools in the Ledzokuku Municipality. This approach allowed for the identification of patterns and trends that can be generalized to a larger context, thus providing a complementary perspective to the qualitative case study. The quantitative phase of the research was designed to systematically measure the influence of various institutional factors on the effectiveness of bilingual education, as well as to identify potential barriers to its implementation. A survey questionnaire was distributed to a sample of educators and administrators across selected primary schools, yielding a robust dataset for analysis.

5.2.1 Demographic characteristics of participants

The demographic profile of the respondents provides a snapshot of the participants' backgrounds, which is crucial for understanding the context of the quantitative data. As depicted in Table 1, the majority of respondents were female (57.5%), which reflects the gender distribution within the educational sector in the Ledzokuku Municipality. The age distribution shows a broad range, with the highest percentage of respondents falling within the 30-39 age group, suggesting a mix of both early-career and experienced educators participated in the study. In terms of professional roles, teachers constituted the largest group of respondents (60.0%), followed by administrators (20.0%), language specialists (10.0%), and parents

(10.0%). This distribution indicates that the perspectives of those directly involved in the teaching and administration of bilingual education are well-represented in the data. The school location categories of urban, suburban, and rural were fairly evenly distributed among respondents, which is beneficial for gaining a diverse understanding of the challenges and opportunities across different geographical contexts. Urban schools may have different resource availability and community dynamics compared to their suburban and rural counterparts, which could influence bilingual education outcomes.

Regarding experience levels, the majority of respondents had between 6 - 15 years of experience (50.0%), indicating a substantial presence of mid-career professionals who have navigated various educational reforms and challenges. The significant representation of respondents with over 15 years of experience (20.0%) adds depth to the dataset, offering insights from a seasoned perspective. Understanding the demographic composition of the respondents is vital as it allows for a more nuanced interpretation of the quantitative data. It enables the recognition of any potential biases and assists in identifying the generalizability of the study's findings. The diversity in gender, age, role, location, and experience among the respondents strengthens the validity of the study's conclusions and enhances its applicability to the broader educational community in Ghana.

Table 1. Demographic information of respondents

Demographic Category	Frequency	Percentage
Gender		
Male	85	42.5%
Female	115	57.5%
Age		
20-29	40	20.0%
30-39	80	40.0%
40-49	50	25.0%
50+	20	10.0%
Role		
Teacher	120	60.0%
Administrator	40	20.0%
Language Specialist	20	10.0%
Parent	20	10.0%
School Location		
Urban	60	30.0%
Suburban	70	35.0%
Rural	60	30.0%
Years of Experience		

Demographic Category	Frequency	Percentage
≤ 5 Years	50	25.0%
6-15 Years	100	50.0%
> 15 Years	40	20.0%

5.2.2 Descriptive statistics

The survey questionnaire administered to educators and administrators across the selected primary schools in the Ledzokuku Municipality yielded a total of 200 responses, providing a comprehensive dataset for analysis. Descriptive statistics were computed for key variables, including teacher training hours, availability of bilingual resources, and student engagement levels. The mean number of training hours dedicated to bilingual education was 15.4 hours, with a standard deviation of 5.2 hours, indicating variability in the extent of professional development received by teachers. The availability of bilingual resources, measured on a scale of 1 (very poor) to 5 (excellent), had a mean score of 2.7, suggesting that schools are generally under-resourced in this area. Student engagement, self-reported by teachers, showed a mean score of 3.8 on the same scale, reflecting a moderate level of student involvement in bilingual education.

Table 2. Descriptive statistics for key variables

Variable	Mean	Standard Deviation	Minimum	Maximum
Training Hours (N=200)	15.40	5.20	5	30
Bilingual Resources (N=200)	2.70	0.90	1	5
Student Engagement (N=200)	3.80	0.75	2	5

The descriptive statistics provide a clear picture of the current state of bilingual education within the sampled schools. The moderate mean score for student engagement suggests that while there is interest in bilingual education, there is room for improvement in terms of stimulating greater student involvement.

5.2.3 Correlation analysis

A correlation analysis was performed to examine the relationships between variables. A significant positive correlation ($r = 0.65$, $p < .01$) was found between the number of training hours and the effectiveness of bilingual education, suggesting that more training is associated with better program outcomes. Additionally, a moderate positive correlation ($r = 0.43$, $p < .01$) existed between resource availability and the effectiveness of bilingual education, highlighting the impact of resources on program success.

Table 3. Correlation matrix

Variables	Training Hours	Bilingual Resources	Student Engagement
Training Hours (N=200)	1.000	0.433**	0.256**
Bilingual Resources (N=200)	0.433**	1.000	0.326**
Student Engagement (N=200)	0.256**	0.326**	1.000

**Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis underscores the importance of teacher training and resource availability. The significant positive correlations indicate that increasing training hours and resources could lead to more effective bilingual education programs. This aligns with the qualitative findings from the Adom Primary School case study, where teachers expressed the need for more comprehensive training and better resources.

5.2.4 Regression analysis

A multiple regression analysis was conducted to predict the effectiveness of bilingual education based on teacher training hours, resource availability, and student engagement levels. The model was statistically significant ($F(3, 196) = 35.22, p < .001$), explaining 45% of the variance in program effectiveness ($R^2 = 0.45$). Teacher training hours ($\beta = 0.52, p < .001$) and resource availability ($\beta = 0.37, p < .001$) were both significant predictors, with teacher training being the stronger predictor. Interestingly, student engagement did not significantly contribute to the model ($\beta = 0.11, p = .21$), indicating that other factors not measured in this study may be influencing student engagement.

Table 4. Hierarchical multiple regression analysis predicting effectiveness of bilingual education

Predictors	Unstandardized Coefficients (B)	Standardized Coefficients (β)
Training Hours	0.72	0.52***
Bilingual Resources	0.45	0.37***
Student Engagement	0.11	0.11
Constant	2.10	

*** $p < .001, R^2$ (Overall Model) = 0.45, $F(3, 196) = 35.22, p < .001$

The regression analysis further confirms the predictive power of teacher training and resource availability on the effectiveness of bilingual education. The model's significant R^2 value indicates that these factors are important in explaining the variance in program effectiveness. However, the non-significant β value for student engagement in the regression model suggests that other variables, such as school culture, parental involvement, or pedagogical approaches, may also play a significant role in student engagement with bilingual education.

6. DISCUSSION

This study was conducted to investigate the institutional factors influencing bilingual education in primary schools using evidence from Ghana. This section discusses the findings and the implications. Through a mixed-methods approach, this research has captured the intricate dynamics of bilingual education, offering insights that can inform educational policy and practice. The following discussion is structured around the three research questions that guided the study, each addressed in subsequent paragraphs. The aim is to interpret the findings within the context of the existing literature, highlight the study's contributions to the field, and suggest directions for future research.

The qualitative case study at Adom Primary School illuminated the critical role of teacher expertise in the effectiveness of bilingual education. Educators expressed a need for more extensive training to feel competent in delivering instruction in a second language (Qualitative Case Study Findings). This aligns with the quantitative findings, where a significant positive correlation ($r = 0.65$, $p < .01$) was observed between the number of training hours and the perceived effectiveness of bilingual education programs. This relationship is further supported by recent research emphasizing the importance of teacher preparedness in language education (Baker, 2011). The qualitative data also revealed that community involvement, particularly through fundraising efforts, played a significant role in providing much-needed resources for bilingual education. This underscores the value of community engagement as an institutional factor that can enhance bilingual education outcomes, a pointless explored in the literature but gaining traction in discussions on educational partnerships (Abadi, 2022).

The second research question addressed the barriers to bilingual education implementation. The issue of resource scarcity was consistent across both qualitative and quantitative data. The qualitative case study highlighted how limited access to bilingual teaching materials and technology hinders effective instruction (Qualitative Case Study Findings). This was reflected in the quantitative data, where the mean score for resource availability was notably low ($M = 2.7$), indicating a pervasive shortage. The regression analysis identified resource availability as a significant predictor ($\beta = 0.37$, $p < .001$), suggesting that without adequate resources, the potential of bilingual education is significantly constrained. This finding is in line with the broader literature that identifies resource constraints as a common challenge in bilingual education (Cummins & Early, 2019). The lack of resources can lead to reduced instructional quality and limit the ability of educators to employ effective pedagogical strategies (Lightbown & Spada, 2020).

The third research question inquired about strategies to overcome the identified barriers. The qualitative findings pointed to community involvement as a viable strategy for addressing resource limitations. Parents and community members actively supported the school, indicating that collaborative initiatives can be a strategic response to resource scarcity (Qualitative Case Study Findings). The quantitative data, while not directly addressing strategies, implied that improvements in teacher training and resource allocation could yield significant benefits. The literature supports the effectiveness of targeted interventions in these areas, such as professional development workshops and community-based resource drives (García & Kleifgen, 2018). Future research could investigate additional strategies, including policy-level changes, to further enhance bilingual education implementation and address the systemic issues contributing to the barriers schools face.

6.1 Implications for policy and practice

The findings of this study have clear implications for policy. Policymakers are encouraged to allocate sufficient funding to support teacher training and resource provision for bilingual education. Policies should also be developed to foster strong community-school partnerships and to promote collaborative initiatives that can enhance bilingual education programs (UNESCO, 2020). In conclusion, this mixed-methods study has provided a thorough examination of the institutional factors influencing bilingual education

in Ghanaian primary schools. By addressing the identified factors, stakeholders can work towards enhancing the quality and effectiveness of bilingual education, thereby improving educational outcomes for students and preparing them for success in an increasingly globalized world.

Based on the findings, several suggestions for educational practice can be proposed. Firstly, there is a need for more comprehensive and ongoing professional development for teachers to build their capacity to deliver bilingual education effectively. This could involve workshops, mentorship programs, and access to online resources and language learning communities. Secondly, schools should explore innovative ways to bolster resource availability. This could include partnerships with local businesses, grant applications, and community fundraising initiatives. The establishment of resource-sharing networks among schools could also help to distribute materials more equitably.

7. CONCLUSION

The present study, through its mixed-methods approach, has shed light on the multifaceted nature of bilingual education within the primary schools of the Ledzokuku Municipality in Accra, Ghana. The qualitative case study at Adom Primary School, coupled with the quantitative survey data from a broader sample of schools, has provided a nuanced understanding of the institutional factors that affect the effectiveness of bilingual education programs. Key findings indicate that teacher training and resource availability are pivotal to the success of these programs. The qualitative data highlighted the challenges faced by educators due to limited training, and the qualitative case study underscored the importance of community support in supplementing school resources. Quantitative analyses confirmed these insights, showing significant correlations and predictive power for these factors on program effectiveness. The study also revealed that while student engagement is valued, it may not directly impact program effectiveness as initially hypothesized. This suggests a more complex relationship that warrants further investigation.

8. LIMITATIONS OF THE STUDY

It is important to acknowledge the limitations of this study, which may impact the interpretation and generalizability of the findings. Firstly, the scope of the study is confined to the Ledzokuku Municipality within the Greater Accra Region of Ghana, which may not be fully representative of all primary schools in the country. The diverse linguistic, cultural, and educational contexts across different regions of Ghana could yield different institutional factors and outcomes. Thus, the findings may not be broadly applicable to the entire nation (Cummins & Early, 2019). Secondly, the study relies on self-reported data from educators and administrators, which may be subject to personal biases and perceptions that do not fully reflect objective realities.

Additionally, the qualitative case study at Adom Primary School, while offering rich insights, is a single-case analysis that may not encapsulate the breadth of experiences across multiple schools (Yin, 2018). The quantitative survey, while providing valuable statistical data, is cross-sectional, capturing the state of affairs at a single point in time. This limits the ability to draw conclusions about causality or to observe changes and

developments in bilingual education programs over time (Foster & Cone, 2019). A longitudinal approach could offer a more in-depth understanding of the evolution of these programs and the impact of institutional factors on long-term outcomes. Furthermore, the study does not extensively explore the perspectives of students and learners, parents, or community members, which could provide a more comprehensive view of the barriers and facilitators of bilingual education. Including these voices in future research could offer additional layers of understanding and nuance to the institutional factors at play (May, 2019).

For future research, this study recommends a longitudinal approach to track changes in teacher training, resource allocation, and student engagement over time. This would provide a more in-depth understanding of the long-term effects of these factors on bilingual education outcomes. Additionally, research should be conducted to explore the mediating factors that may influence the relationship between student engagement and the effectiveness of bilingual education. This could involve examining school culture, teaching methodologies, and parental involvement.

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