

EXAMINING TEACHER EDUCATION IN GHANA REGARDING PRE-SERVICE  
TEACHERS' ETHNIC AWARENESS

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## ABSTRACT

Bruce Collet, Committee Chair

The issue of teacher scarcity in the Bawku Municipality of the Upper East of Ghana continues to be an ongoing struggle and has proven to be pervasive. This issue has affected enrolment rates and literacy and completion rates in the district. Researchers have shed light on this issue from different perspectives, yet a lasting solution has proven elusive. This study attempts to contribute to the ongoing discussion of the problem by examining the ethnic awareness of pre-service teachers to understand their level of cultural awareness, their cultural preparedness, and their multicultural teaching skills and knowledge. This study adapted the Multidimensional Multicultural Teaching Competency Scale (MTCS) as the research design to sample data from 107 pre-service teachers from Peki College of Education and Gbewaa College of Education. The data collected was analyzed using a statistical t-test analysis. The results revealed that pre-service teachers in Ghana's Colleges of Education are culturally prepared and exhibit multicultural teaching skills and knowledge to teach in a different cultural setting, yet they prefer teaching in their home regions. This study failed to reject the null hypothesis, revealing that the scarcity of teachers in the Bawku Municipality could comprise a factor other than teachers' cultural awareness or their multicultural teaching skills and knowledge.

**Keywords:** pre-service teachers, teacher scarcity, cultural awareness, cultural preparedness, multicultural teaching skills and knowledge.

I dedicate this thesis to my family, especially my mom Salmata Imam Abubakar whose words of motivation and encouragement continually propel me forward

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## CHAPTER I. INTRODUCTION

In our contemporary globalized era, the pursuit of quality education, equity, and diversity has become a driving force behind educational reforms. However, one of the most significant obstacles to achieving these desired goals is recruiting and retaining qualified teachers in underrepresented communities (UNESCO Institute for Statistics [UIS], 2016). The UIS emphasizes the critical need to recruit 68.8 million teachers worldwide to fulfill Sustainable Development Goal 4 (SDG 4), which aims to ensure equity, inclusivity, and diversity and promote quality education and lifelong learning experiences for all (UIS, 2016). Addressing the challenge of attracting and retaining academically and methodologically talented teachers is a very difficult struggle faced by educational systems globally, including developed countries like the United States and the United Kingdom, as highlighted by Hill-Brisbane and Easley-Mosby (2006).

Teacher education is pivotal in shaping pre-service teachers' knowledge, skills, and attitudes (Abeykoon & Adu, 2018). Teacher education continues to be a topic of great importance in Ghana as it becomes evident that access to quality education remains a challenge, particularly for underprivileged populations and deprived regions in the country (Amankwah, 2015). It is widely believed that the learning outcomes of students, particularly those from marginalized and disadvantaged communities, are significantly impacted by the quality of their teachers. As a result, there is a growing recognition that the educational quality and effectiveness of Ghana's Colleges of Education play a crucial role in shaping the future of these students (Amankwah, 2015; Archibald, 2006).

According to the USAID project "Reaching the Underserved: Complementary Models of Effective Schooling," governments in the Sub-Saharan region have made significant strides in

providing primary education to school-going children in urban areas. However, this progress has not extended to rural areas, where severe teacher scarcity persists (DeStefano et al., 2007).

Primary education, otherwise termed basic education in Ghana, is structured into three phases: a 2-year kindergarten program, a 6-year primary education, and a 3-year Junior High School (JHS) education (Ministry of Education, 2004). The basic school education system represents the foundational stage of formal education that every child in Ghana is entitled to attend under the 1992 constitution of the Republic of Ghana (Quansah et al., 2019). The primary education's primary aim is to equip students with the essential knowledge and skills necessary to progress up the educational ladder. The educational crisis in rural Northern Ghana is concerning, with many schools being ineffective and many children having never had the opportunity to attend school (Quansah et al., 2019). Statistics provided by Ntim (2017) reveal a stark reality, indicating that only 5% of the population aged 11 and above in the three Northern regions of Ghana have had the chance to attend school. The illiteracy rate stands at 75 percent among residents in these regions, as highlighted by Quansah et al., (2019). The Open Data Initiative of Ghana's Ministry of Communication (2020) sheds light on the literacy rate in the three northern regions of Ghana, revealing that the three Northern regions experience significantly lower enrollment and completion rates than other regions in the country. Several studies have established a compelling correlation between the persistently low enrollment rates observed in the underserved regions of Ghana and the scarcity of qualified teachers. The scarcity of teachers has been attributed to interconnected factors, including socioeconomic challenges in these regions (Abotsi, 2013; Atta & Manu, 2015).

Bawku East, located in the Upper East Region of Ghana, is one of the eight districts in the region. The Municipality is home to the Kusasi tribe; their native language is "Kusal."

However, Bawku East Municipality has several tribal groups like the Mamprusi, Moshie, Busanga, Hausa, Frafra, Akan, Bimobas, and Konkomba. The population of Bawku East Municipality is characterized by its rural nature per the Ghana Statistical Service indicators, with a large proportion of residents engaged in subsistence farming (Ghana Statistical Service [GSS], 2021). The agricultural sector forms the backbone of the local economy, with farming activities such as crop cultivation and livestock rearing being the community's primary income sources. The Bawku East is a prime example of a marginalized Ghanaian community, per GSS indicators, facing various population, economic, education, security, and health challenges. More specifically, regarding education, Bawku East Municipality struggles with the lack of adequate educational facilities, leading to low enrollment rates, low completion rates, and high illiteracy rates (Ibrahim & Johnson, 2021). This creates a significant barrier for school-going children to access quality education and further their academic pursuits. The lack of educational opportunities hinders human capital development and perpetuates the community's poverty cycle (Opoku Agyeman et al., 2022).

### **Statement of the Problem**

Despite efforts of Ghana's Ministry of Education to improve educational access and increase completion and literacy rates in the country, there remains a significant disparity in educational outcomes, particularly evident in basic education levels. According to UNICEF (2020), the completion rates of school-going children in Northern Ghana sharply declined at the pre-tertiary level, with only 47 percent of students completing Junior High School (JHS), and further diminished to 35 percent at the Senior High School (SHS) level. The issue of low completion rate and high illiteracy rate is worse in marginalized and rural areas in the Upper East

Region, where only 9 percent of school-going children manage to complete primary education (Anon, 2023).

Ampiah and Elkins (2010) have revealed disparities in completion rates among different ethnic groups in Ghana. They assert that children from the Mole-Dagbani ethnicity face significant educational challenges, with only 9 percent of school-going age in the district completing primary school. In contrast, children from the Akan ethnicity consistently exhibit higher completion rates across all educational levels. Ampiah and Elkins (2010) attribute the high illiteracy and low completion rates among ethnic groups in underserved regions to the scarcity of teachers. The scarcity of teachers in rural and disadvantaged communities is a critical factor contributing to these disparities. Factors such as limited resources, inadequate infrastructure, and challenging living conditions make it difficult to attract and retain qualified teachers in these areas (Cobbold, 2015; Mereku, 2019; Akyeampong & Stephens, 2002).

These challenges underscore the urgent need to explore the factors influencing educational outcomes, particularly the ethnic awareness of pre-service teachers. Understanding the extent to which pre-service teachers in Ghana possess ethnic awareness and its implications for educational equity and inclusivity is critical for developing targeted interventions to address the persistent disparities in educational attainment and completion rates, especially in marginalized and rural communities like the Bawku municipality.

### **Purpose of the Study**

Understanding the intricate factors contributing to the scarcity of qualified teachers in rural and underserved areas of Ghana is of utmost importance in addressing the educational challenges these communities face. Several studies on teacher scarcity in Ghana have shed light on socioeconomic factors such as poverty, lack of teaching and learning materials (TLMs), and

inadequate infrastructure as contributing factors to teacher scarcity in some parts of the country (Opoku Agyeman et al., 2022; Tamanja & Pagra, 2017). The findings of the previous studies on the scarcity of teachers in rural Ghana have been instrumental in informing policies (Azewara et al., 2021). However, there is still a critical research gap regarding the impact of ethnicity on teacher scarcity in Ghana. To address this research gap, this study examines the level of cultural awareness, multicultural teaching skills and knowledge, and the cultural preparedness of pre-service teachers of Gbewaa and Peki Colleges of Education. The aim is to determine whether these pre-service teachers are culturally prepared to serve in the Bawku West district of Ghana. By delving into the ethnic dynamics of pre-service teachers and the educational system, this study seeks to provide valuable insights that can contribute to the ongoing efforts of the Ministry of Education in tackling the persistent issue of teacher scarcity in rural Ghana.

Ethnic awareness significantly shapes an individual's perception, attitudes, and behaviors toward others (Ibrahim & Johnson, 2021). Within the context of teacher education, ethnic awareness among teachers profoundly impacts instructional practices, classroom management strategies, and student interaction (Birmeh & Adusah, 2017). Therefore, it is imperative to understand how the ethnic awareness of pre-service teachers in Ghana may influence their commitment to teaching, retention rates in rural communities, and the overall quality of education provided. The findings of this research will not only enhance stakeholders' understanding of the various factors influencing the scarcity of teachers in rural Ghana but also provide critical insights into how to address the issue of teacher scarcity in the Bawku Municipality. By delving deeper into the understanding of the intricate factors of teacher scarcity in the Bawku Municipality and understanding of the cultural preparedness of pre-service teachers, the Government of Ghana, through its Ministry of Education and stakeholders in

education, can work towards developing targeted interventions and support systems that will ensure the availability of qualified teachers in rural and underserved areas of Ghana, ultimately improving the quality of education in these communities.

### **Research Questions**

The study initially aimed to address the following research questions: (1) To what extent does the lack of familiarity of primary school teachers with ethnic groups in the Bawku West district contribute to teacher scarcity in the community? (2) To what extent does the lack of familiarity of primary schoolteachers with ethnic groups in Bawku West District affect students' educational achievement? and (3) What are the newly trained teachers' ethnic awareness levels concerning teaching in a rural area? However, due to adjustments in the adapted research instrument and the findings from the literature review, modifications were necessary for the research questions. Hence, the following research questions and hypotheses guided the study;

1. What are the differences in ethnic demographics among pre-service teachers at Peki and Gbewaa Colleges of Education?
2. To what extent do pre-service teachers engage in interregional travel for teacher training?
3. What are the preferred teaching settings among pre-service teachers?

### **Research Hypothesis**

#### **Hypothesis 1**

$H_0$ : There is no significant difference in the level of cultural awareness among pre-service teachers from the Peki and Gbewaa Colleges of Education.

$H_1$ : There is a significant difference in the level of cultural awareness among pre-service teachers from the Peki and Gbewaa Colleges of Education.

#### **Hypothesis 2**



H<sub>0</sub>: There is no significant difference in cultural preparedness between preservice teachers of Peki and Gbewaa Colleges of Education.

H<sub>1</sub>: There is a significant difference in cultural preparedness between preservice teachers of Peki and Gbewaa Colleges of Education.

### Hypothesis 3

H<sub>0</sub>: There is no significant difference in the multicultural teaching skills and knowledge among pre-service teachers enrolled at Peki and Gbewaa Colleges of Education.

H<sub>1</sub>: There is a significant difference in the multicultural teaching skills and knowledge among pre-service teachers enrolled at Peki and Gbewaa Colleges of Education.

### Definition of Terminology

I use specific definitions and terminologies for essential terms and concepts to ensure precision and eliminate ambiguity in this study. Establishing a common language is crucial for accurately understanding and interpreting the study's findings. The following definitions are crucial to understanding the study's context and findings.

#### Rural Area

A “rural area,” according to the United States Census Bureau, is an open stretch of land with few residences, structures, and a low population density (n.d). Ghana Statistical Service (2014) defines rural areas as small towns or localities with a population ranging from 5,000 to 19,999 individuals.

#### Teacher Trainees

“Teacher Trainees” is the term used to describe pre-service teachers in Ghana.

#### Northern Ghana

The term "Northern Ghana" traditionally refers to the three Northern Regions: UpperEast, Upper West, and Northern Region. However, due to a recent regional reintegration and demarcation, the term Northern Ghana in this study extends also to include the North-East and Savannah Regions.

### Pre-tertiary Education in Ghana

Pre-tertiary education in Ghana refers to primary schools, secondary schools, and special schools. The basic schools include 2-year kindergarten, 6-year primary, and 3-year junior high school. The secondary school level includes 3-year senior high education and/or 3-year technical/vocational education. This study focuses on the basic level of pre-tertiary education.

### Organization of the Chapters

This thesis was structured into five chapters. Each chapter delved into some aspects of the research topic. Chapter One sets the stage by offering a concise overview of the study's research topic and background, explaining the study's purpose, defining terminologies relevant to the study, and highlighting the significance of this study. Chapter Two delved into literature relevant to the study. This chapter briefly described the country of Ghana, its geographical location, and its ethnic and language composition. Chapter Two also delved into the evolution and structure of teacher education in Ghana. This chapter discussed multicultural education and the theoretical framework adopted for this study. Chapter Three, the methodological section of this thesis, outlined the research questions, discussed the research design, the population, and sampling techniques, and explained the methodologies employed for data collection and analysis. This chapter also evaluated and established the validity and reliability of the Multicultural Teaching Competencies Scale (MTCS) (Spanierman et al., 2010). Chapter Four analyzed the data gathered from the Peki College of Education and the Gbewaa College of

Education. Lastly, Chapter Five summarized the essence of this scholarly pursuit by offering a comprehensive conclusion that captured the study's findings. Furthermore, this chapter explained the implications of the research findings and propounded avenues for future exploration, aiming to foster equity and equal opportunities for all students within the educational landscape in Ghana.

## **CHAPTER II. LITERATURE REVIEW**

### **Introduction**

In contemporary educational discourse, the importance of cultural sensitivity and awareness among teachers has gained increasing recognition as a fundamental component of effective pedagogy, particularly in diverse and multicultural settings (Nieto, 2006). By examining the ethnic familiarity of pre-service teachers in Ghana, this study complements the efforts put forth by the government of Ghana and key stakeholders in education to address the scarcity of teachers in the Bawku Municipality of the Upper East region of Ghana. This chapter reviews existing literature relevant to the study, briefly describes the country Ghana, and discusses the teacher education program in Ghana.

The exploration of ethnic familiarity among teachers in Ghana is situated within the broader discourse on teacher preparedness, cultural competence, and the provision of equitable education. With the persistent challenges of scarcity of teachers and educational disparities, particularly in rural and marginalized communities, understanding the extent to which teachers are familiar with the ethnic backgrounds and cultural contexts of students in the Bawku Municipality is crucial for informing policy interventions that will ensure equal opportunity for all school going age. This chapter also discusses multicultural education theory as the theoretical framework for the above reasons.

### **Demographic Description of Ghana**

As a sovereign nation in West Africa, Ghana prides itself on its rich cultural heritage and diverse ethnic groups. According to data from the Ghana Statistical Service's 2021 Population and Housing Census, the country's population is approximately 30,832,019. Geopolitically, Ghana shares borders with three francophone nations: Burkina Faso to the north, Cote D'Ivoire

to the west, and the Republic of Togo to the east (GSS, 2021). To the south, Ghana's coastline along the Gulf of Guinea provides access to the Atlantic Ocean (Figure. 1).

**Figure 1**

*<sup>1</sup>Location of Ghana on the African Map*



Following Ghana's independence from the British in 1957, Ghana emerged as a beacon of hope and resilience for Africa. This historic achievement marked a significant milestone for Ghana and the entire African continent, as it became the first African nation to break free from colonial domination (Apter, 2008). Governed under a unitary system reminiscent of the British model, Ghana operates with a President serving as both head of state and government business. A multi-party system further enriches the country's political landscape, fostering robust political participation and representation. Since gaining independence, Ghana has experienced shifts in

<sup>1</sup> This map was retrieved from [https://www.al.com/living/2011/06/the\\_trials\\_of\\_blogging.html](https://www.al.com/living/2011/06/the_trials_of_blogging.html)

political leadership among parties such as the National Democratic Congress (NDC), the Convention People's Party (CPP), the People's National Convention (PNC), and the New Patriotic Party (NPP). While some of these transitions were influenced by coup, the period following the introduction of democracy in 1992 has seen a transition of political power between the National Democratic Congress (NDC) and the New Patriotic Party (NPP) (Oluwatobi & Adekeye, 2022; Puplampu, 2004).

In terms of economic indicators, Ghana has witnessed substantial GDP growth over the years. From its independence in 1957 to 2022, the country maintained an average GDP of \$16.80 USD Billion. In 2022, Ghana recorded a GDP of \$73.77 USD Billion (Poku et al., 2022). It is crucial to acknowledge, as Smith (2019) argues that GDP alone does not offer a complete understanding of a nation's development. Additional metrics such as income distribution, poverty rates, and human development indices are essential for fully understanding Ghana's socio-economic landscape. Ghana has made remarkable progress across various sectors, including agriculture, mining, manufacturing, and services, thus achieving economic diversification and overall growth. Notably, Ghana stands as the world's second-largest cocoa producer, with an average annual production of 800,000 tonnes, and the seventh-largest gold producer globally (Appiahene-Gyamfi & Agyeman, 2018; Attah-Obeng et al. 2013).

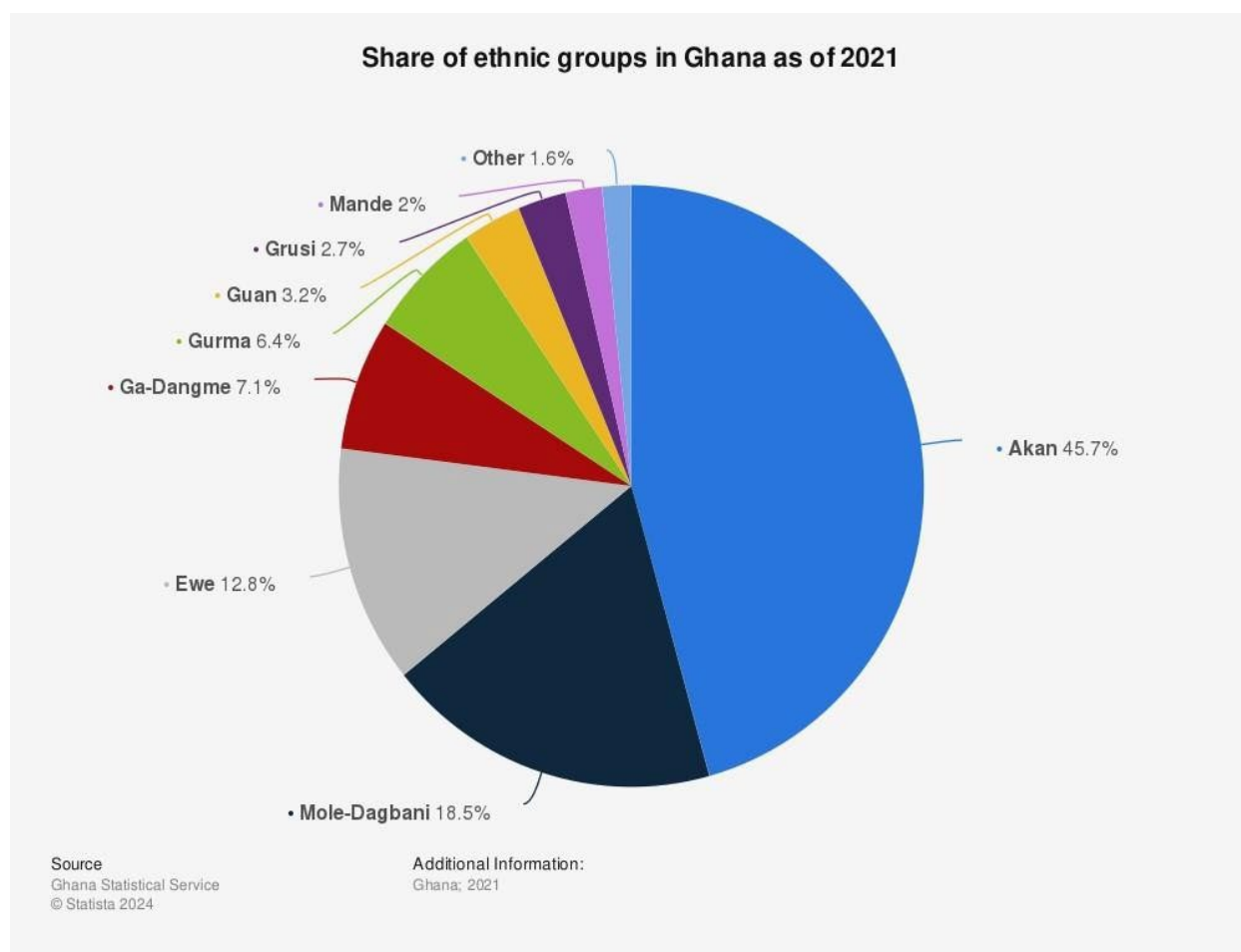
### **Ethnic and Linguistic Composition of Ghana**

The ethnic demography of Ghana is characterized by diverse ethnic groups, each contributing to the country's cultural makeup. Data from the Ghana Statistical Service shows approximately 100 distinct ethnic groups in Ghana, with the major ethnic groups being the Akan, Éwé, Guans, Ga-Adangbe, and Mole-Dagbon (GSS, 2022; USAID, 2020). These ethnic groups are dispersed across the sixteen regions of the country. Each ethnic group in Ghana has its

unique cultural practices, traditions, and languages, which play a pivotal role in shaping the social dynamics of the various communities. The Akan ethnic group is the largest in Ghana, with a shared percentage of 45.7%. The Akan comprises various subgroups such as the Ashanti, Fante, and Akuapem. The Mole-Dagbani ethnic group accounts for 18.5% of Ghana's population and is mainly found in Northern Ghana. This group includes various subgroups, like the Dagombas, Mamprusis, and Mossis. The Éwé people predominantly reside in the Volta Region (south-eastern side of Ghana) and makeup 12.8% of Ghana's population (GSS, 2021). In the Greater Accra Region, the nation's capital, the Ga-Adangbe ethnic group, consisting of the Ga and Adangbe subgroups, collectively represents 7.1% of the populace. The Guan ethnic group, dispersed across different regions of Ghana, has a population share of 3.2%. In addition to these major ethnic groups, Ghana is home to several minor ethnic communities, such as the Gruma (6.4%), Gurusi (2.7%), and Mande (2%). Other ethnic groups numerically account for 1.6% (Sasu, 2023).

**<sup>2</sup>Figure 2**

*The Graphical Representation of the Major Ethnic Groups in Ghana*



Ghana is linguistically diverse, boasting a wide range of local languages, with over 70 languages spoken by various ethnic groups (GSS, 2021; Sasu, 2023). While English is the official language, indigenous languages hold immense significance in daily communication and cultural practices (Sasu, 2023). According to the comprehensive global linguistic resource Ethnologue: Languages of the World, as cited in a 2020 report by the United States Agency for International

<sup>2</sup> This chart was downloaded from <https://www.statista.com/statistics/1285431/share-of-ethnic-groups-in-ghana/>



Development (USAID), the West African nation of Ghana has great linguistic diversity, with 81 living languages of which 73 indigenous languages are native to the land, while eight are classified as non-indigenous introduced from foreign nations. 13 Ghanaian local languages are deemed institutional and used in education, work, mass media, and government. A significant portion, 46 languages, are classified as developing. The Akan language is the most widespread in Ghana, boasting 8.1 million native (L1) speakers. Other indigenous languages with substantial speaker populations include Éwé, with 3.32 million speakers; Dagbani, with 1.16 million speakers; Dangme, with 1.02 million speakers; and Dagare, with 924,000 speakers (GSS, 2021).

### **Culture, Ethnicity, and Education in Ghana**

According to the Ministry of Education in Ghana (MOE, 2004), language serves as a vital medium for communication, acting not only as a means of conveying messages or a medium of instruction but also as a storehouse where cultural knowledge and traditions are preserved and passed down through generations. As emphasized by Ghana's Ministry of Education, language plays a central role in safeguarding and nurturing the rich cultural heritage of a society, functioning as a living "library" that houses the collective wisdom, stories, and values of a community (MOE, 2004). Adu asserts that heritage language learners connect with their roots, engage with their history, and uphold the diverse cultural expressions that define their identity. In this way, language serves as a powerful tool for both interpersonal communication and the preservation of cultural legacies, serving as a cornerstone for Ghanaian culture (2018).

According to Bardel et al. (2022), language is the most reliable means of preserving and transmitting cultural components from one generation to another. The language policy of the Ghana Education Service specifies and mandates Kindergarten to Primary 3 teachers to use the child's L1 as the language of instruction (MoE, 2004, pp. 27-28). According to Adu (2018), to

ensure effective teaching and learning, teachers should be proficient in the Ghanaian native languages. According to the Ministry of Education in Ghana, studying a learner's native language and culture can help students become more aware of their identity while providing practical communication skills that will allow them to appreciate the ideals represented in their language and culture. They will be aware of their cultural values and traditions, which will assist them in becoming honest and responsible community members (MoE, 2019). Research has shown that learners fluent in their native language learn a second language faster and better (McIvor et al., 2020; Quansah et al., 2019).

Race (2015) underscored the significance of acknowledging multiethnic settings in educational institutions, as ethnic diversity and multiculturalism play pivotal roles in shaping learning and teaching experiences. Amoako (2016) argues that ethnic awareness involves recognizing and understanding the differences between various ethnic groups and cultures and aspects such as learners' language, beliefs, behaviors, and traditions. As educational institutions, schools play a crucial role in fostering students' perceptions of diverse ethnic, racial, and cultural backgrounds. Promoting ethnic awareness within these educational settings has the potential to positively influence the younger generation, fostering a broader understanding of equality (Nieto & Bode, 2018). According to Banks (2017), ethnic awareness entails being aware of the existence and significance of various ethnic groups. Banks argues that this raises teachers' awareness of combatting bias and promoting understanding among diverse students. According to Jeffries, incorporating ethnic studies into the teaching curriculum reduces ethnic prejudice while increasing academic engagement and student performance. Jefferies (2019) explores the profound impact of teachers' exposure to ethnic differences on learners' perceptions and attitudes. According to his research, such exposure creates a heightened sense of respect and

understanding, ultimately fostering an effective teaching and learning environment. Ethnicity significantly impacts social institutions, including schools. Ethnic awareness, in its broadest sense, translates to the recognition, understanding, and acknowledgment of the complexities associated with diverse ethnic identities (Banks, 2004). It is linked to cultural competence, which involves teachers with the appropriate skills to effectively manage cultural diversity in their classrooms. Studies highlight that teachers with higher ethnic awareness lean towards inclusive educational practices that embrace diversity (Banks, 2017; Jeffries, 2019).

An analysis of Agyei and Voogt (Agyei and Voogt 2011) shows an inherent acknowledgment and understanding of the ethnic plurality among teachers in the Ashanti Region in Ghana. The study shows that teachers in the Ashanti Region vary their pedagogical strategies to integrate cultural aspects of other ethnic groups. Antwi (1992) reveals that some teachers in Northern Ghana have prejudices against students who are not part of the dominant ethnic group in the region. These biased inclinations disrupt the learning process and lead to some degree of ethnic divisiveness among students. A critical challenge of ethnic awareness in Ghana is that teachers are predominantly of one ethnic group and not sufficiently exposed to other ethnic realities (Agbenyega, 2011; Dei, 2004; Nketsia, 2016). This limits how much they can fully understand and appreciate the culture of students from different ethnic backgrounds. Such a situation may result in unintentional exclusionary practices, ultimately affecting the quality and inclusivity of education provided (Agyei & Voogt, 2012).

### **Pre-Service Teacher Education Program in Ghana**

Teacher education in Ghana has a rich and complex history, deeply linked with the country's development and educational progress. The structure and evolution of teacher education in Ghana have been shaped by various factors, including colonial influences, educational

policies, and the nation's changing needs (Amankwah, 2015; Akyeampong & Stephens, 2002). Historically, teacher education in Ghana can be traced back to the colonial period when the British introduced formal education. During this time, teacher training was mainly provided through mission schools and training colleges established by the colonial authorities (Baku, 2017). The colonial rulers instituted the pupil-teacher system to train indigenous people to teach in formal schools. The pupil-teachers were mainly trained via mentoring and observation rather than robust pedagogical training (Akyeampong, 2003).

After gaining independence in 1957, education emerged as a paramount priority of the country (Ampiah & Elkins, 2010). Teacher education is a significant aspect of any nation's educational system as it helps develop the disciplinary and social-emotional competencies needed for effective teaching (Mereku, 2019). Over the years, teacher education in Ghana has witnessed different transformations, substantially shaping the country's education system. According to Akyeampong (2003), the indigenous education system was the pre-colonial era's cornerstone of teaching and learning. This system entailed specialized training of young people in various trades and cultural norms in the non-formal setting, with instructors as the elderly or masters of the craft. After gaining independence in 1957, education emerged as a paramount priority of the country (Ampiah & Elkins, 2010). Teacher education is a significant aspect of any nation's educational system as it helps develop the disciplinary and social-emotional competencies needed for effective teaching (Mereku, 2019). Over the years, teacher education in Ghana has witnessed different transformations, substantially shaping the country's education system. According to Akyeampong (2003), the indigenous education system was the pre-colonial era's cornerstone of teaching and learning. This system entailed specialized training of young

people in various trades and cultural norms in the non-formal setting, with instructors as the elderly or masters of the craft.

Recognizing the pivotal role of education in fostering progress and empowering its citizens, the Government of Ghana acknowledged the critical importance of nurturing highly qualified and dedicated teachers. In a visionary move, the government established a network of teacher training colleges nationwide, laying the foundation for a robust and effective educational system (Mereku, 2019). These teacher training colleges assumed a crucial responsibility to train and equip future generations of primary (elementary) schoolteachers with the knowledge, skills, and pedagogical expertise necessary to shape and transform the nation's trajectory (Buabeng & Ntow, 2014). By investing in the training of teachers, the Government of Ghana aimed to ensure that every child, regardless of their background, has access to quality education and the opportunity to realize their fullest potential (World Bank Group, 2021).

Currently, there are 48 Colleges of Education in Ghana. These Colleges of Education serve as institutions where pre-service teachers immerse themselves in a comprehensive curriculum, delving into the intricacies of various subjects and disciplines (Mereku, 2019). Through a rigorous academic program complemented by hands-on teaching experiences, these colleges trained teachers with a deep understanding of the principles of effective teaching and a genuine passion for imparting knowledge (Anamuah-Mensah, 2006). The impact of these teacher-training colleges extended far beyond the confines of the classroom. These institutions play a pivotal role in fostering social cohesion and national unity by imparting academic knowledge and cultivating a sense of cultural pride and national identity (Buabeng et al., 2020).

Pre-tertiary education in Ghana refers to the basic and secondary school institutions that include 2-years kindergarten, 6-years primary, 3-years junior high school, and 3-years second

cycle education (senior high school, technical/vocational institutions) and special education schools. Like many developing countries, Ghana's educational system, including teacher education, has challenges and opportunities. While the country has made significant strides in expanding access to education in recent years, disparities in educational quality and outcomes persist, particularly in rural and underserved areas (Ampiah & Elkins, 2010). The scarcity of teachers at the basic schools, inadequate teaching and learning resources, and infrastructural limitations pose significant barriers to educational attainment for many Ghanaian school-going children, particularly those from marginalized communities (Amankwah, 2015; Ampiah & Elkins, 2010; Birmeh & Karikari, 2017). In response to these challenges, The Government of Ghana (GoG), through its Ministry of Education, has prioritized improving teacher training and professional development, recognizing teachers' pivotal role in shaping the nation's future (Amankwah, 2015). Ghana's pre-tertiary teacher education program prepares pre-service teachers to function effectively in basic and secondary schools. It develops and nurtures pre-service teachers to become reflective and proficient professionals capable of providing equity and quality education for all school-age children (MOE, 2012, p. 8). Teacher education plays a crucial role in shaping the quality of education and preparing future generations of teachers (Akyeampong & Stephens, 2002).

In the pre-tertiary education sector in Ghana, teachers are grouped into two categories: professional and non-professional. According to Ghana's Ministry of Education (MoE, 2012), professional teachers at the primary school level have a minimum teaching qualification (Diploma in Basic Education) obtained from an accredited higher educational institution for training teachers like the colleges of education and universities. According to Transforming Teaching Education and Learning (T-TEL), the mandate of the Colleges of Education is to

ensure that pre-service teachers receive proper training and are equipped with the necessary skills and knowledge to effectively educate students at the primary school level (T-TEL, 2019). The other category of teachers at the basic schools are the non-professional teachers who do not hold the minimum teaching qualification (Diploma in Basic Education). These teachers include those with a Senior High School (SHS) certificate with three credits, including English and mathematics, and university graduates without a certification in teaching (MOE, 2012). These teachers are mainly recruited to teach in rural and deprived areas to fill the gap of professionally trained teachers. This situation raises concerns about the professionalism of teachers without the minimum teaching qualification (Henaku & Pobbi, 2017).

### **Pre-Service Teacher Education Reforms in Ghana**

Recently, there has been a shift towards a more comprehensive and integrated approach to teacher education in Ghana. The introduction of the Bachelor of Education (B.Ed.) program has aimed to improve the quality and professionalism of teachers (T-TEL, 2019). Before the teacher education reforms in 2014, the Colleges of Education offered a three-year Diploma in Basic Education (DBE) program (Buabeng et al., 2020). According to Akyeampong and Stephens (2002), teacher education in Ghana has undergone significant reforms to enhance teachers' professional development and meet the country's changing needs. These reforms aimed to equip teachers with the necessary pedagogical skills, content knowledge, and competencies to deliver education in diverse classroom settings effectively. The emphasis on teacher professionalism reflects the recognition that well-trained teachers are vital for improving learning outcomes and promoting educational equity (Akyeampong & Stephens, 2002). Buabeng et al. (2020) argue that the recent reform incorporates theoretical and practical components,

equipping teachers with the necessary knowledge and skills for more effective teaching than before.

In 1961, Ghana launched a five-year accelerated development plan for education, emphasizing the demand for primary school teachers and expanding the number of Teacher Training Colleges (Munene, 2016). The introduction of the 1987 Educational Reforms was a pivotal moment in the evolution of teacher education. The reforms emphasized the quality of teacher education and catered for the professional development of teachers. The change saw the upgrade of Teacher Training Colleges to Colleges of Education, which offered a three-year post-secondary Teacher Certificate 'A,' thus fostering a more competent pedagogical force (Zajda et al., 2008, p. 49 ). The most recent significant reform came with Ghana's introduction of the four-year Bachelor of Education (B.Ed.) program in 2018. According to T-TEL (Transforming Teaching Education and Learning), the initiative saw a shift from the initial Diploma in Basic Education at the Colleges of Education to improve teacher quality. T-TEL (2019), upheld a student-centered teaching methodology, in-service training, and core curriculum study. Afful-Broni (2020) argues that while these moves theoretically address the demand for professionally trained teachers, they deepen the discourse on the adequacy of resources to execute the program.

According to Anamuah-Mensah (2006), these reforms resulted in a variety of teacher skill sets and qualifications. The teacher education program began with a 2-year Post-Middle Certificate "B" program, followed by a 4-year Post-Middle Certificate "A" and a 2-year Post-Secondary Certificate "A" program. In the early 1980s, the 2-year Post-Secondary program was expanded to a 3-year program that ran alongside the 4-year certificate "A" programs until it was shortened. However, the reforms implemented by Ghana's Ministry of Education had little impact on students' learning outcomes (Anamuah-Mensah, 2006).



To address the issue of teacher education and achieve the goal of colleges of education producing and equipping pre-service teachers with the necessary skill set, the Government of Ghana, through its Ministry of Education, recognized the need for continuous professional development for teachers, resulting in the passage of legislation aimed at transforming the country's educational system (Buabeng et al., 2020). Section 9 of the 2008 Education Act (Act 778) authorized the formation of a National Teacher Council (NTC). The National Teacher Council is responsible for establishing professional practices and ethical standards for teachers and educators and registering and certifying individuals seeking to enter the teaching profession.

The Act also authorizes the NTC to suspend a teacher's license if a teacher violates the professional code of ethics that governs Ghana's teaching profession. As such, ACT 778 aimed to make teaching in Ghana a profession with established norms of ethics and minimum acceptable abilities for people who are hired to teach in the country's pre-tertiary schools. The second piece of legislation is the Colleges of Education Act 847, which seeks to upgrade Colleges of Education into postsecondary institutions. Following the implementation of the legislation Act 847 in 2018, Colleges of Education were elevated to four-year degree-awarding institutions. Prior to the enactment of Act 847, the Colleges of Education were designated as Teacher Training Colleges and were supervised by the Ghana Education Service, which oversees pre-tertiary teacher education. The National Council for Tertiary Education (NCTE) has subsequently overseen the colleges.

Appiah et al. (2018) assert that teacher education in Ghana has experienced significant transformations, reflecting the country's desired pursuit of educational excellence. These changes have been implemented to enhance the quality of teacher preparation programs and improve the overall education system in Ghana. One notable change Appiah et al. emphasized is the re-

evaluation and redesign of the curriculum for teacher education. The curriculum now emphasizes practical teaching skills, pedagogical knowledge, and critical thinking abilities, equipping teachers with the necessary tools to engage and educate students effectively. Appiah and Elkins (2010) opine that Ghana's current teacher education program has shifted towards a more student-centered approach. Akyeampong and Stephens (2002) argue that the pedagogical shift in teacher education acknowledges students' diverse needs and backgrounds, promoting inclusivity and equity within the classroom. Teachers are now encouraged to adopt innovative teaching methods that foster active learning, collaboration, and critical inquiry. This departure from traditional teaching methods has empowered teachers to address the specific learning needs of individual students and create a conducive learning environment that nurtures their intellectual growth. By restructuring the curriculum, adopting student-centered pedagogies, and implementing rigorous assessment procedures, Ghana strives to equip its teachers with the skills and knowledge necessary to foster meaningful learning experiences and contribute to developing a well-educated society (Appiah et al., 2018).

Despite the shift in teacher education curriculum, challenges such as teacher motivation, scarcity of teachers, inadequate teaching and learning materials (TLMs), and weak school-based support in rural and marginalized communities remain barriers to achieving the United Nations Developmental Goal 4. Researchers concur that overcoming these obstacles is essential to realizing the transformative effects of these evolutionary changes on the quality of education (Appiah et al., 2018; Mereku, 2019; Williams III et al., 2022).

### **Pre-Service Teacher Education Training Model**

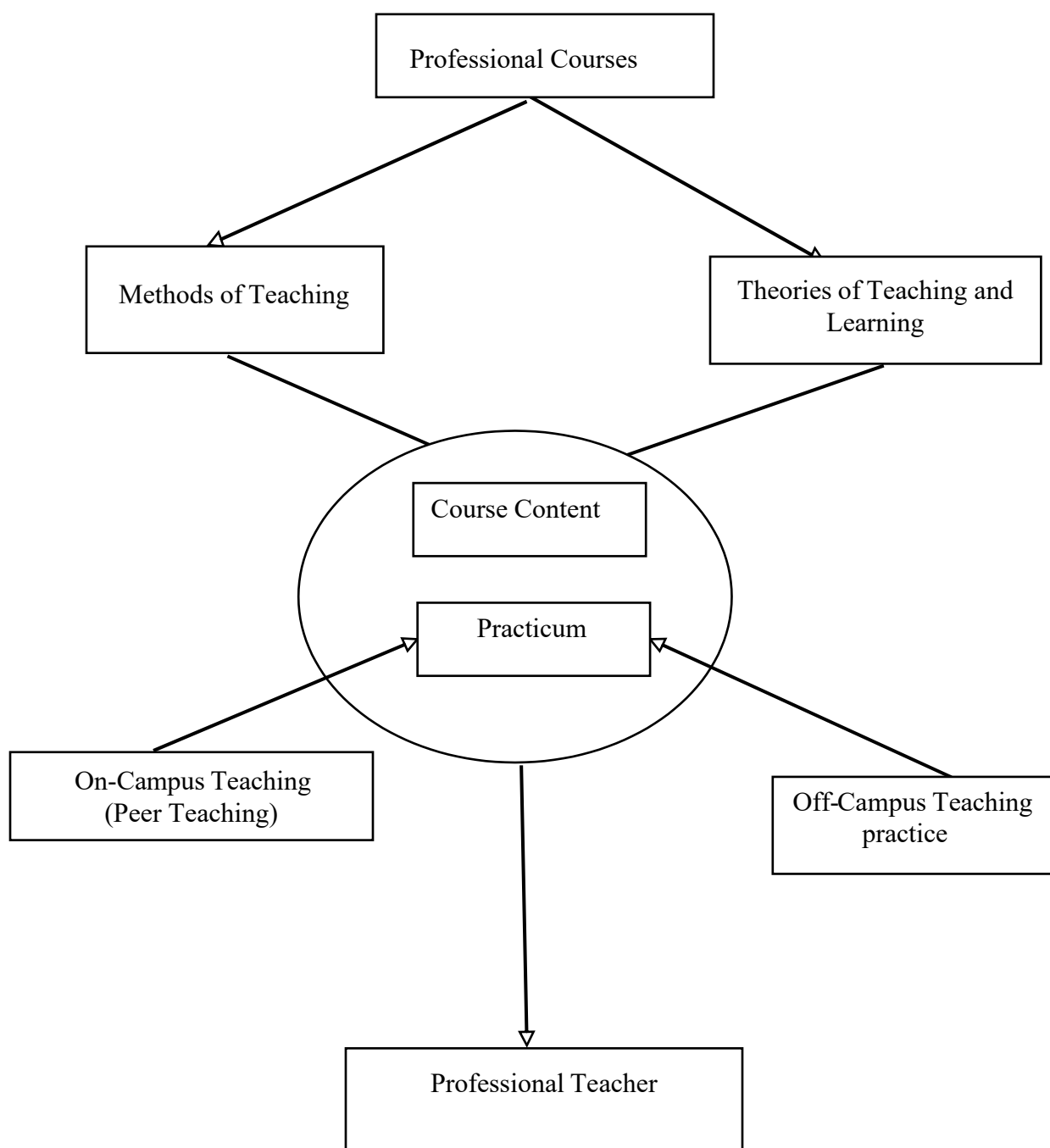
The systematic changes to the pre-service teacher education program have implications for the country's quality and standard of teacher education (Asare & Nti, 2014). Opoku-

Amankwa (2009) argues against the prevailing dual-mode teacher training system that includes regular and distance programs, with the latter aimed at addressing the challenges of teacher shortage in rural and marginalized regions. Opoku-Amankwa raised concerns about the quality assurance distance teacher education programs that aimed at equipping non-professional teachers with relevant teaching skills and certification. For example, Opoku-Amankwa argued that, unlike the colleges of education teacher training model, distance teacher education programs, also known as Untrained Teachers Diploma in Basic Education (UTDBE), lack a comprehensive teacher training framework to equip pre-service teachers with relevant skills. While the pre-service college of education trainees receive a two-semester of 14-16 weeks of teacher education training and teaching internship for an academic year, UTDBE trainees obtain the same instruction in no more than 8-10 weeks.

The Untrained Teachers Diploma in Basic Education (UTDBE) program in Ghana was introduced by the Ministry of Education in 2007 to address the issue of teacher scarcity in rural and underserved areas. The Ministry of Education, at the time of launching the UTDBE program, anticipated the program would augment the training of teachers significantly, which would be required to ensure equitable and high-quality education at the pre-tertiary levels (MoE, 2010). This program is designed as an in-service distance learning program, specifically targeting individuals who are currently untrained teachers. The program aimed to provide these teachers with the necessary pedagogical skills and knowledge to become well-rounded teachers who are motivated and willing to teach in rural and deprived areas (Ntim, 2017). By offering this program as a distance learning option, the Ministry of Education seeks to overcome the challenges of geographical barriers and limited access to traditional teacher training colleges. This program provides an opportunity for individuals already working as teachers in rural and

deprived settings to enhance their qualifications, improve their pedagogical skills, and aim at improving the overall quality of education in these underserved areas (Casely-Hayford et al., 2014). The program aimed to recognize the importance of addressing the teacher deficit in rural and deprived settings by providing targeted training and support and equipping untrained pre-service teachers with the skills and expertise necessary to effectively engage with students in these settings (MoE, 2010).

The preparation of pre-service teachers for basic schools in Ghana follows a dual structure where trainees take content and methodological courses. The content and methodology courses are to equip in-service teachers with instructional skills. The second training phase is the practicum, which comes in two folds: the on-campus teaching practice (peer teaching) and the off-campus teaching practice (community-based teaching). An underlying assumption of the off-campus teaching practices is to provide an opportunity for in-service teachers to familiarize themselves with community practices, customs, and traditions (Bailey et al., 2011). The model of pre-service teacher development is shown in Figure 3.

**Figure 3***<sup>3</sup>Pre-Service Teacher Education Training Model*<sup>3</sup> Buabeng et al., 2020

## **The Rational and Teacher Deployment System in Ghana**

The provision of quality education hinges upon the availability of qualified and dedicated teachers (Hedges, 2002). In Ghana, especially in the northern part of the country, the deployment and management of teaching staff in schools pose significant challenges. According to Hedges (2002), teacher demand is characterized by the need for competent teachers to fill teaching vacancies in educational institutions, while teacher supply refers to the number and distribution of teachers willing and able to teach in areas where their services are most needed. The persistent shortage of teachers in Ghana, particularly in deprived regions like the Upper East Region, has remained a formidable obstacle for the Ghana Education Service for years. Hence, formulating and implementing robust teacher recruitment and deployment policies are imperative (Hedges, 2002).

Quansah et al. (2019) outline the factors driving the demand for new teachers in Ghana, which include the increasing school-age population, government initiatives such as the School Feeding Program, and the Free Senior High School Education aimed to increase educational student enrollment and decrease student absenteeism, and high rates of teacher attrition. The policy framework for teacher deployment used before, as outlined in the Ghana Education Service's manual for Pre-tertiary Teacher Professional Development and Management, underscores the decentralized nature of the teacher demand and supply system, with districts educational authorities tasked with the recruitment and retention of teachers by standardized policy directives and regulations set forth by the Ministry of Education (Annan, 2020).

Historically, one strategy Ghana's Ministry of Education employed to address the scarcity of teachers in Ghana involved the recruitment and deployment of non-professional graduates, particularly in underserved rural schools. In response to the challenges posed by teacher scarcity,

a series of measures were instituted, including conducting comprehensive school mapping exercises to ascertain optimal teacher supply and deployment levels, devising new guidelines for school staffing and transfers of teachers at the basic education level, and aligning the subject expertise and academic qualifications of teachers with appropriate levels of schooling. Strategies include augmenting the teaching workforce with national service personnel in the short term, reassigning surplus professional teachers to classroom roles, and recruiting untrained teachers to teach in areas where the services of the teachers are needed.

Despite concerted efforts to ensure equitable teacher deployment across the country, challenges persist regarding the equitable distribution of teachers in terms of number of available teachers, experience, and qualifications. The Ministry of Education emphasized the high pupil-teacher ratio (PTR) in rural and underserved districts, which contrasted with a surplus of teachers in urban areas. The implementation of initiatives such as capitation grants and school feeding programs has led to increased pupil enrollment rates in rural areas. Consequently, the challenge remains to adequately supply teachers to meet the heightened demand resulting from expanded enrollment rates (Akyeampong & Stephens, 2002).

Recent studies conducted in Ghana have shed light on the attrition rates among newly trained teachers, suggesting that professionally trained teachers are more likely to remain in the teaching profession compared to those without formal training (Buabeng, et, al 2020). The shortage of teachers in northern Ghana has emerged as a significant barrier to educational advancement in the region (Akyeampong, 2002). As defined by Dupriez et al. (2016), teacher scarcity implies the disparity between teacher demand and the available supply of teachers. Research indicates that while there may be a sufficient number of teachers in some cases, the

inability of educational authorities to retain and effectively deploy teachers worsens the issue of teacher scarcity (Aragon, 2016; Moltz, 2019).

Struyven and Vanthournout (2014) note that many newly trained teachers exit the profession within a short period after gaining practical experience. Researchers have sought to identify the characteristics of teachers and aspects of their work environment associated with early attrition from the teaching profession (Akyeampong, 2002; Dupriez et al., 2016). Factors such as teachers' socio-demographic profiles, the nature of their teacher education training, and specific work environment features contribute to the risk of attrition in the teaching sector. Numerous studies have identified various factors contributing to the persistent problem of teacher attrition in Ghana. Notably, inadequate teacher compensation stands out prominently (Akyeampong, 2002). Bennell and Akyeampong (2007) emphasize that Ghanaian teachers receive lower wages compared to other professions with similar qualifications, leading to dissatisfaction and subsequent attrition. However, challenging working conditions such as overcrowded classrooms, lack of teaching and learning materials, and infrastructural deficiencies significantly contribute to teacher attrition, particularly in northern Ghana (Adu, 2005). This lack of motivation and professional development results in the departure of experienced and competent teachers from the service (Nyarko, 2008), hindering efforts to improve teaching and learning quality in rural areas.

The high rate of teacher attrition compromises education quality, particularly in rural Ghana; as experienced teachers exit the profession, less experienced teachers fill the gap. This leads to inconsistencies in education delivery and compromises the teacher-student ratio, burdening the remaining teachers and increasing the risk of burnout (Teach for All, 2018). According to the Ghana Education Service (GES), 18 percent of teachers in northern Ghana left



the profession between 2013 and 2018, with primary education experiencing a steady increase in departures from 5,983 in 2012 to 11,780 in 2018 (GES, 2019). Several factors contribute to this trend, including lack of administrative support, inadequate remuneration, unfavorable working conditions, and overall lack of teacher motivation (Akyeampong, 2002).

The consequences of teacher attrition in Ghana are significant, affecting the consistency of instruction, student-teacher relationships, and students' learning outcomes (Akyeampong, 2002). Moreover, the costs associated with hiring and training new teachers are higher than retaining competent ones, leading to resource diversion (Sutcher et al., 2016). To address this issue, the Ghanaian Government has invested in upgrading teachers' qualifications through scholarships and free professional training (World Bank, 2014). Additionally, the GES has initiated various workshops to enhance classroom management skills and strengthen teachers' pedagogical knowledge. These efforts aim to mitigate teacher attrition and improve Ghana's overall quality of education.

### **Evidence of the Scarcity of Teachers in Bawku and Rural Ghana**

The scarcity of teachers in rural Ghana has been consistent and pervasive. The Ministry of Education's ability to recruit and retain highly qualified teachers in rural and underserved areas has been an ongoing struggle (Aragon, 2016; Moltz, 2019). Tran et al. (2020) presented a compelling discussion on the issue of teacher scarcity in rural and deprived areas, bringing forth critical insights from the perspectives of rural teachers concerning the development of realistic job previews (RJP) to enhance teacher recruitment and retention (p. 34). While UNICEF highlights the recent improvement in the student-teacher ratio within primary education in Ghana, disparities persist in rural and underserved areas where one teacher caters to the educational needs of as many as twice the students of acceptable student-teacher ratio of one

teacher to thirty-five students (UNICEF, 2021). A UNICEF study conducted as part of the Multiple Indicator Cluster Surveys-Education Analysis for Global Learning and Equity (MICS-EAGLE) initiative has explained disparities in educational completion rates among school children in Ghana. The study reveals that children from poor households and marginalized rural areas exhibit completion rates that fall below the national average, contrasting with their urban and more affluent counterparts who surpass the national benchmark. The deviation in completion rates between children from the wealthiest and poorest homes deepens significantly as they progress through the educational system. Statistics indicate that 71 percent of children from the most affluent homes complete upper education, contrasting with 9 percent of their counterparts from the poorest homes who achieve the same milestone (UNICEF, 2018).

Statistics according to UNESCO show that at all three levels of education; basic, secondary, and tertiary, completion rates are lower, and the number of children not completing each level is higher in the Upper East Region than in all regions except the Upper West Region. The statistics also reveal that Mole Dagbani ethnicity has a lower completion rate than all other major ethnic groups in Ghana. The national literacy rate of 15- 24-year-olds is 83 percent. However, only 14 percent of those 15-24 years bracket in the Bawku Municipal are literate. According to UNESCO (2021), Most children in schools in the Upper East Region are not learning. Thus, 52 percent of children enrolled in primary schools lack foundational reading skills and 49 percent lack foundational numeracy skills. The number of rural children who do not have foundational skills is higher in the Northern, Upper West, and Upper East regions. Ntim (2017) argues that learning outcomes are directly tied to the quality of teaching. Akyeampong (2017) opines that improving access to quality education over the past decades has not improved learning outcomes for children in poor and marginalized communities like the Bawku

Municipality. According to UNESCO (2013), achieving the United Nations Sustainable Development Goal 4, Inclusive and Quality Education for all children of school-going age, requires every child to have access to quality teachers. However, many children in the Bawku Municipality lack access to well-trained teachers.

Several factors have been attributed to the issues of teacher scarcity in Bawku. However, the most predominant factor in recent years has been the chieftaincy dispute in the municipality. The chieftaincy dispute in Bawku has been a long-standing and deeply rooted issue that has had far-reaching effects on every aspect of community life, including education (Opoku Agyeman et al., 2022). Bawku has experienced intermittent conflicts over chieftaincy succession for decades, often fueled by ethnic and political tensions between the Kusasis and Mamprusis, the two main ethnic groups in the area or the supporters of the two main political groups in Ghana, the National Democratic Congress (NDC) and the New Patriotic Party (NPP). One of the significant impacts of the chieftaincy dispute on education in Bawku is the disruption of schooling activities. During periods of heightened conflict, schools are often forced to close temporarily for the safety of students, teachers, and staff (Akugri, 2023). The closure of schools not only interrupts the learning process but also creates a sense of instability and fear among students and their families, leading to absenteeism and a decline in academic performance.

Studies have opined that the chieftaincy dispute has contributed to the displacement of families and communities, leading to the loss of livelihoods and the disruption of social networks. Displaced families often struggle to access education for their children, particularly during periods of conflict when schools may be inaccessible or unavailable in temporary settlement areas. The tense security situation resulting from the chieftaincy dispute has created an environment of fear and insecurity, making it challenging for students and teachers to safely

travel to and from school. This not only affects attendance rates but also hampers schools' ability to attract and retain qualified teachers, particularly those from outside the region who may be hesitant to work in areas prone to conflict (Alhassan et al., 2017; Akugri, 2023; Opoku Agyeman et al., 2022).

According to Aasoglenang (2014), the chieftaincy dispute has diverted government resources and attention away from educational development initiatives in Bawku. Efforts that could have been directed towards improving infrastructure, expanding access to education, and enhancing the quality of teaching and learning have instead been allocated to managing and mitigating the effects of the conflict. This chieftaincy dispute in Bawku has had detrimental effects on education, worsening existing challenges and hindering progress toward achieving educational goals in the region (Alhassan et al., 2017).

### **Addressing Teacher Scarcity in Rural Communities**

According to the United Nations, the scarcity of teachers has become an increasingly pressing concern for educational systems worldwide, a problem that demands urgent attention and action (UN, 2015). This issue is particularly alarming, given the educators' pivotal role in shaping the youth's minds and futures. According to UNESCO (2021) projections, to reach education goals by 2030, sub-Saharan Africa must recruit 15 million teachers. In countries like Nigeria, Ghana, Ethiopia, and Tanzania, the lack of qualified teachers in underserved regions has reached critical levels, impeding the progress of educational initiatives. The scarcity of teachers undermines the quality of education provided and perpetuates and worsens existing social and economic disparities (UNESCO, 2021). Without enough teachers to cater to the needs of expanding student populations, the potential for individual growth and societal development remains limited (Birmeh & Adusah, 2017).

This pressing issue has been particularly felt in rural communities where the scarcity of qualified teachers hampers educational development (Williams III et al., 2022). Addressing the disparity in the distribution of teachers becomes vital in setting an equitable standard of education for all, regardless of demographic location (UN, 2015). International organizations such as the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the Organization for Economic Cooperation and Development (OECD) actively devise policies to redress this imbalance (Akyeampong, 2017). Examples of such policies that aim to improve the recruitment and retention of qualified teachers in rural and underserved regions include the Government of Ghana, which, through the Ministry of Education, enhances the training and professional development of teachers who serve in those areas and creates a conducive environment for teaching and learning. One key policy suggestion is to increase the recruitment of qualified teachers in remote and disadvantaged areas. This can be achieved through targeted incentives, such as higher salaries, housing and transportation facilities, and financial incentives for teachers willing to work in underserved regions. Another policy recommendation is to prioritize the training and professional development of teachers. This involves investing in pre-service and in-service training programs that equip teachers with the necessary skills and knowledge to effectively teach diverse groups of students. Creating a conducive teaching and learning environment is also crucial. This includes ensuring adequate school infrastructure and resources, such as well-equipped classrooms, libraries, and laboratories (Ntim, 2017).

Scholarly articles have shown that resolving the teacher shortage crisis involves not a single strategy but rather an amalgamation of strategies, balancing immediate alleviations with long-term structural modifications to the educational system (Buabeng et al., 2020; Birmeh & Adusah, 2017). This premise has influenced a lot of interventions, policies, incentive schemes,

and technological inclusion with the belief of bridging the gap between urban and rural education and ensuring equal access to all school-going age in Ghana (Akyeampong, 2018). UNESCO proposed strategies such as providing monetary incentives and salary increments, facilitating career progression, introducing housing facilities, and improving teachers' working and living conditions in rural and deprived areas, which can attract teachers to these areas (UNESCO, 2016).

### **Culture, Ethnicity, and Multicultural Education in Teaching Practice**

Mead (2002), as cited in Sycara et al. (2013), defines "culture" as a set of customary behaviors developed by humans and passed down through generations. According to Brumann (1999), culture is a traditional behavior characteristic of a given society for a certain period. Anthropologists associate culture with groups of people and a wide range of concepts such as norms, values, shared meanings, and formed ways of behaving. Culture is the collection of ideas, beliefs, art, law, morals, customs, emotional responses, and styles of behavior that members of a society have acquired through instruction or imitation. Sycara et al. (2013) believe our culture influences what and how we talk, how we think, and what we think about and how we perceive the world. They argue that culture, as it is usually studied in anthropology, is no longer bound to a geographical area, religion, race, or region (Sycara et al., 2013).

Gay (2018) argues that the interplay between communication, culture, and teaching has significant implications for student learning, emphasizing the critical need to train culturally responsive educators. Brown (2005) and Keengwe (2010), despite acknowledging the importance of current teacher education programs focusing on diversity and multiculturalism, believe that a stand-alone course does not help train pedagogical and culturally responsive teachers. According to Mulkeen (2010), most African countries' teacher education curricula,

particularly those in the Sub-Saharan region, do not provide enough learning opportunities for teachers to develop the competence skills required to teach effectively in multicultural classrooms. Providing adequately qualified teachers in rural and disadvantaged communities is critical for promoting and ensuring quality education for all and reducing poverty (Palmer, 2005).

According to Nukunya (2003), ethnicity refers to the identification and categorization of individuals based on shared cultural practices, traditions, language, and ancestral heritage. Ethnicity plays a crucial role in shaping Ghanaian society's social, political, and economic dynamics. Nukunya, (2003) emphasizes that biological factors do not solely determine ethnicity but are rather a social construct influenced by historical, cultural, and political factors, which evolves and transforms over time due to various factors such as migration, intermarriage, and social interactions. Ethnicity in the Ghanaian context can be seen as a means through which individuals identify and connect with their cultural roots while influencing group formations, social hierarchies, and political allegiances. According to Schneiderman and Amburgey (2022), ethnicity can be both a vehicle for social reform and a weapon of prejudice. Ben-Rafael (2021) and Gay (2018) opine that ethnicity can contribute to institutional chaos and segmentation and, if not adequately addressed, will likely present more challenges to academic success. Bennett (2009) argues that when ethnocentrism exceeds certain thresholds, it hinders progression and socioeconomic well-being. Teachers teaching in multicultural classrooms, according to McAllister and Irvine (2020), "face increasing challenges in providing an appropriate classroom environment and high standards of instruction that foster the academic achievement of all students, particularly students from low socioeconomic backgrounds." Teaching in multicultural

classes necessitates teachers with additional competencies and skills in interaction, classroom management, and assessment (Chamberlain, 2005; Samovar et al., 2012).

The lack of teachers in marginalized and underprivileged communities has become a critical issue for educational systems around the globe. Recent academic research has identified multicultural education as one approach that could offer a realistic solution to Ghana's teacher shortage issue (Banks, 2017; Chang et al., 2011). According to several academic studies, traditional strategies for addressing teacher shortages, like enhanced teacher development and training and the introduction of or increases in teacher incentives, have only partially succeeded in reducing this deprivation (Amoako, 2016; Cerqua et al., 2014).

Dei (2004) opines that teaching and learning in cross-cultural settings fosters a new learning perspective by exposing students to other cultural backgrounds and increasing awareness of their academic and cultural routines. Dei (2004) justifies the importance of teaching in cross-cultural settings, stating that it provides theoretical and applied information to school administrators, offers them various case studies and options, and hints at potential results in addressing educational disparities. He further asserts that multiculturalism aids in combatting provincialism and ethnocentrism, encourages the study of school system history and development, and raises awareness of the interaction between schools and their social and cultural environments.

Teaching as defined transcends borders. Cross-cultural teaching, where pedagogy is shared across different cultural lines, brings about various factors that significantly impact a teacher's performance and output. Mngomezulu (2013) defines cross-cultural teaching as an activity in which teachers and learners form remarkably diverse cultural backgrounds for teaching and learning. The definition underscores the core of this teaching modality – the



interaction of distinct cultures within a learning environment (Mngomezulu, 2013). Stafford et al. (2017) posited that teachers who lack cultural awareness often struggle to bridge the knowledge gap effectively. Mngomezulu (2013) also emphasizes the significance of recognizing cultural identity, including values, traditions, and perceived norms of conduct. They believe an effective learning environment is easily achievable if a teacher understands, respects, and incorporates cultural diversity.

Hampden-Turner et al. (2004) state that an elevated "cultural intelligence" level is necessary for adaptive learning processes. A teacher with "cultural intelligence" will be able to recognize a person's cultural-cognitive profile and establish an acceptable communication strategy, as well as, in the case of strategic planning, an individual approach to education with appropriate methodologies and training materials. Deardorff (2006) opines that interculturally competent teachers must understand and experience relevant, diverse cultures to live and interact with individuals from various cultures effectively.

According to Ting-Toomey (2011), teaching in a multicultural setting necessitates a higher level of communicative competence than is typically found in teachers. For Sokal and Parmigiani (2022), intercultural teaching experiences increase teachers' tolerance, cultural awareness, self-reflectivity, and intercultural sensitivity. Multicultural teaching allows teachers to overcome ethnocentrism by learning about other cultures rather than expecting students to be more like the dominant culture. Understanding cultural norms and expectations and recognizing cultural differences provides a solid foundation for cross-cultural teaching (Banks, 2017). Bennett (2009) opines that teachers' educational philosophies, teaching methods, and roles typically stem from their own cultural experiences, which can sometimes conflict with the learning approaches of students from different cultures. Research by Ladson-Billings (1994)

cited in Bennett (2009) underlines the enormity of the need for multicultural education, arguing that teachers need to shift from a traditionally urban-centric approach towards one that acknowledges and incorporates diverse cultures into teaching methods. Ladson-Billings posits that understanding and acknowledging cultural diversity is crucial for student engagement and overall academic success. Gay (2010) suggests that teacher education programs should prioritize multicultural education to ensure the students' cultural differences are appreciated rather than ignored or superseded. Gay contends that multicultural education fosters cultural competence and responsiveness among teachers. McIntosh (2010) echoes Gay's sentiments, arguing that recognizing diversity and incorporating multicultural elements in education inevitably enrich the learning environment, fostering a more dynamic and understanding. McIntosh (2010) believes that multiculturalism in teacher education nurtures a positive attitude amongst teachers towards cultural diversity, promoting a sense of respect and mutual understanding.

### **Theoretical Framework**

The study is guided by multicultural education theory. This theory calls for teachers to adapt or incorporate instructional materials and methods to reflect the cultural diversity present among students. It embodies educational approaches that integrate individuals from various cultural backgrounds' diverse histories, texts, values, beliefs, and perspectives. Banks (2006) described multicultural education as a systematic approach to providing equitable educational opportunities for all students. It involves teachers adjusting their instructional methods to accommodate the diverse needs and interests of learners while also ensuring that the learning environment reflects the varied backgrounds and interests of all students. Multicultural education recognizes and appreciates diverse cultures and deliberately integrates these cultural differences into the teaching and learning process. It emphasizes the importance of fostering an inclusive and

equitable educational environment that values and celebrates various cultural groups' unique perspectives and histories (Banks, 2017).

As a modern approach to teaching, multicultural education aims to celebrate diversity in the classroom. No matter their social, cultural, or racial background, it aspires to give pupils equitable opportunity (Banks, 2017). The creation of an inclusive atmosphere that appreciates diversity and cultural understanding has been the central theme of contemporary educational discourse. According to Banks (2019), the goal of multicultural education is to bring about change and provide educational equity for a variety of student populations. Embracing and using multicultural education is the key to achieving educational equity, but only when done so carefully and with regular re-evaluation and development. Ladson-Billings (2014) emphasizes the value of multicultural education in encouraging socially just behavior and raising citizens who are aware of the world.

Some scholars contend that, while well-intended, multicultural education may unwittingly amplify erroneous preconceptions rather than deconstruct them. An ill-conceived multicultural curriculum may reduce cultures to stereotypes (Nieto & Bode, 2007). Gay (2018) supports Nieto and Bode's claim by emphasizing the need for culturally responsive teaching, in which educators are culturally aware and modify teaching approaches to meet the different needs of their students. Gay's work supports a more compassionate and empathic education system that values people of all races, ethnicities, and cultures. Teachers may establish a secure and inclusive learning environment by providing a culturally responsive curriculum, encouraging children to learn and thrive regardless of their cultural backgrounds (Gay, 2018).

According to Lenski et al. (2005), the primary aim of multicultural education is to highlight and address oppression and social injustices in our educational system stemming from

factors such as race, religion, disability, social class, and gender. The knowledge of multiculturalism aims to equip teachers to contribute to societal reconstruction, ensuring inclusivity for all individuals from diverse genders, socio-economic backgrounds, political affiliations, cultural heritages, and linguistic origins. Banks (2017) notes that the call for multicultural education for pre-service teachers initially arose as a response to the academic struggles faced by minority and marginalized students. However, this need has gained prominence, prompting colleges of education and universities across the globe to continually enhance the preparation of pre-service teachers for effective engagement in multicultural environments.

While some researchers like Bleicher (2011) and Davis et al. (2010) contend that pre-service teachers receive sufficient multicultural education to enable them to be culturally responsive in diverse teaching settings, Brown (2005), Cheng (2011) and Keengwe (2010) argues that most teacher education program globally inadequately prepares pre-service teachers with multicultural teaching skills and knowledge. Chang et al. (2011) identify reflection and service learning as two crucial factors necessitating comprehensive cultural awareness training and multicultural teaching skills and knowledge among pre-service teachers for effective functioning in diverse teaching environments.

According to Chang et al. (2011), reflection and service learning are not just practices but essential means to prepare pedagogical and culturally responsive teachers. Reflection enables pre-service teachers to contemplate their multicultural experiences and thoughts, analyze and discuss their multicultural encounters in classrooms, and relate them to theories and best practices in education. On the other hand, service learning involves pre-service teachers immersing themselves in multicultural settings (Carter, 2009). Combining these two factors in

pre-service teacher education, as advocated by He and Cooper (2009), leads to inculcating multicultural teaching skills and knowledge among pre-service teachers. Bleicher (2011) proposes that as a strategy for training culturally conscious teachers, professors in college education can use reflection to deliberate on how pre-service teachers' experiences intersect with multiculturalism and guide the approach to instilling cultural consciousness in them.

Reflection bridges the gap between theory and practice and allows college professors to understand the dispositions of pre-service teachers upon entry into the teaching program. These dispositions can help colleges of education design curricula that better prepare pre-service teachers to serve effectively in multicultural settings (Ford & Quinn, 2010). Liggett (2011) emphasized that service learning is a strategy for instilling multicultural teaching skills and knowledge to educate pre-service teachers on skills and knowledge applicable to diverse educational settings. Exposing pre-service teachers to diverse classroom settings plays a crucial role in enhancing pre-service teachers' multicultural teaching skills and knowledge (Chang et al., 2011). Research indicates that even short-term placements in diverse school environments can significantly enhance pre-service teachers' understanding of diversity and multicultural education (Bleicher, 2011; Chang et al., 2011).

The University for Development Studies - Ghana (UDS) trimester program aims at fostering cultural responsiveness, multicultural skills, and cultural awareness among its graduates. Is an example of service learning. UDS designed its trimester program to provide students with a comprehensive understanding of diverse cultures, traditions, and perspectives, thereby preparing them to thrive in an increasingly globalized world (Mohammed et al., 2018). The UDS trimester program emphasizes experiential learning and community engagement. Through service-learning projects, internships, and fieldwork experiences, students can immerse

themselves in local communities, interact with diverse populations, and gain first-hand knowledge of different cultural practices and traditions (Chang et al., 2011). This hands-on approach enhances students' understanding of multiculturalism and fosters empathy, cultural sensitivity, and a deeper appreciation for diversity (Mohammed et al., 2018). Wade (2006) asserts that field experiences with a service-learning component offer pre-service teachers opportunities to immerse themselves in community practices. Carter (2009) further supports this notion, highlighting the significant benefits of service learning for pre-service teachers, particularly in broadening their perspectives on rural schools and deprived communities.

## **CHAPTER III. METHODS**

### **Introduction**

The study emphasizes unraveling the intricate connection between pre-service teachers' cultural familiarity and the persistent scarcity of teachers in the Bawku municipality. By zeroing in on the ethnic awareness of prospective teachers, their multicultural teaching skills and knowledge, and their cultural preparedness to teach in Bawku municipality, The study adopted a quantitative research approach to explore the depth of ethnic awareness among pre-service teachers within Ghana's Colleges of Education. The focal point of this investigation is to delve into the intricate fabric of the scarcity of teachers prevalent in Bawku West municipality and explore the possibility of correlations between this scarcity and the levels of cultural and ethnic consciousness exhibited by teachers in Ghana. This chapter states the research questions and hypothesis. It describes the research methods used to collect the data, the population under study, the sampling strategy employed, the chosen instruments for data collection, ethical considerations, and the reliability and validity of the instrument used.

### **Research Questions and Hypothesis**

1. What are the differences in ethnic demographics among pre-service teachers at Peki and Gbewaa Colleges of Education?
2. To what extent do pre-service teachers engage in interregional travel for teacher training?
3. What are the preferred teaching settings among pre-service teachers?

### **Hypothesis 1**

$H_0$ : There is no significant difference in the level of cultural awareness among pre-service teachers.

H<sub>1</sub>: There is a significant difference in the level of cultural awareness among pre-service teachers from the Peki and Gbewaa Colleges of Education.

#### Hypothesis 2

H<sub>0</sub>: There is no significant difference in cultural preparedness between preservice teachers of Peki and Gbewaa Colleges of Education.

H<sub>1</sub>: There is a significant difference in cultural preparedness between preservice teachers of Peki and Gbewaa Colleges of Education.

#### Hypothesis 3

H<sub>0</sub>: There is no significant difference in the multicultural teaching skills and knowledge among pre-service teachers enrolled at Peki and Gbewaa Colleges of Education.

H<sub>1</sub>: There is a significant difference in the multicultural teaching skills and knowledge among pre-service teachers enrolled at Peki and Gbewaa Colleges of Education

### **Method**

The choice of a quantitative design was strategic, allowing the data to be presented as objective numerical information that could be rigorously analyzed through statistical methods (McCusker & Gunaydin, 2015). This approach ensures accuracy by operationalizing variables for appropriate data quantification and facilitates drawing meaningful conclusions from the gathered information (Creswell, 2014). A quantitative research design eliminates the impact of researchers' subjective inclinations on the final assessment, ensuring a more objective analysis (Rahman, 2017). A survey research design was adopted because of its ability to draw direct conclusions from statistical analyses that ensure objective data evaluation (Creswell, 2017). This design offered participants anonymity, reducing response bias as their identities remained undisclosed to the researcher or their affiliations. Using a survey as the primary tool for data



collection, the study aimed to collect data from a representative sample on some characteristics of pre-service teachers in Ghana. Creswell (2017) highlights that surveys aid in numerically describing attitudes, trends, or opinions within a population. While qualitative approaches allow for a more personalized touch and the inclusion of non-verbal cues in interpretation, a quantitative design focuses on larger sample sizes and quickly gathering information. The quantitative research approach maintains participant anonymity and does not require direct observation of the action or process being researched (Creswell, 2014; McCusker & Gunaydin, 2015).

### **Sampling Technique**

This research targeted the 2023 cohort of pre-service teachers enrolled in Ghana's colleges of education, constituting the population of interest. Ghana boasts a network of forty-six (46) public Colleges of Education across the sixteen administrative regions of Ghana. The population in research refers to the entire group of people, items, or objects that possess specific characteristics and are of interest to the researcher (Rahi, 2017). This population is the target group from which the researcher aims to draw conclusions or make generalizations. However, due to the typically extensive size of the population, it becomes impractical to involve every individual member in the data collection phase. Hence, the necessity arises to draw a representative subset, known as a sample, to capture the essence of the broader population (Creswell, 2014). Sampling allows for a manageable and feasible approach to gathering data that reflects the characteristics of the population (Campbell et al., 2020).

The sampling strategy employed in this study was characterized by a purposive sampling technique carefully designed to acquire data from two distinct Colleges of Education. The approach was conscientiously balanced, aiming to get representative samples from Peki College

of Education and Gbewaa College of Education. The purposive sampling technique involves selecting participants based on specific criteria relevant to the research objectives (Lub, 2015). This approach reflects a systematic and deliberate method of participant selection that is aligned with the research goals. Specifically, data intentionally gathered from two distinct Colleges of Education, Peki College of Education and Gbewaa College of Education, includes selection criteria such as the geographical locations of the colleges and their significance in addressing the research questions.

Peki College of Education is located in the Volta Region of Ghana, one of the regions with a notable educational landscape. With a population of 1,659,040, per the Ghana Statistical Service's 2021 Population and Housing Census data, Volta Region boasts the highest number of Colleges of Education in the country and is among six regions with a higher literacy rate (70.9%) than the national literacy rate (69.8%). In contrast, Gbewaa College of Education is located in the Upper East region of Ghana, with a population size of 1,301,221 and a literacy rate of 48.1%, which falls below the national average. Literacy, as defined by the Ghana Statistical Service, encompasses the ability to read and write in English and at least one local language (GSS, 2021).

This study sampled participants from Peki College of Education (43) and Gbewaa College of Education (64) to ensure the adequacy and comprehensiveness of data. By selecting colleges from different regions, the study captured varied perspectives and experiences related to pre-service teachers' cultural awareness level, multicultural teaching skills and knowledge, and preparedness to teach in a rural area like the Bawku Municipality. The sampling strategy employed in this study, purposive sampling, demonstrates flexibility and adaptability by carefully balancing the selection of colleges to gather comprehensive data. Unlike other

sampling techniques, this method recognizes the importance of including institutions from different regions to obtain a well-rounded understanding of the research topic.

Targeting the 2023 cohort of pre-service teachers from these institutions ensured a focused and relevant dataset, offering insights into the perceptions and experiences of those on the verge of entering the teaching profession. By concentrating solely on this 2023 cohort of pre-service teachers, the study sought to capture critical perspectives and attitudes among these trainees as they approached the completion of their teacher education journey. This methodological choice aimed to provide a more comprehensive understanding of the factors influencing pre-service teachers' readiness and their choice of place of teaching.

### **Instrumentation**

This study used a survey to collect data. Ponto (2015) defines a survey as gathering information from a population by sampling their responses to established questions. McCusker and Gunaydin (2015) support the use of a questionnaire to gather data, as it can be applied to many different areas. Thus, it provides “more inclusive findings” (p. 540), as it is focused on a portion of a specific population. I received written permission to modify and use the Multidimensional Multicultural Teaching Competency Scale (MTCS), developed by Spanierman et al. (2010) (see Appendix A). This instrument measured pre-service teachers' proficiency in multicultural teaching skills and knowledge, ethnic or cultural awareness of teachers, and their cultural preparedness to teach in the Bawku Municipality. I adapted and made some changes to the Multidimensional Multicultural Teaching Competency Scale (MTCS), to capture relevant participant data. These changes I made are relevant and valid within the Ghanaian cultural context, reflecting Ghana's socio-cultural realities. In determining the target population for the study, various criteria for participant inclusion were incorporated into the test items. These

changes include test items such as the expected year of graduation, a program of study, and pre-service teachers' hometowns, all essential for capturing a representative sample of pre-service teachers in Ghana.

The survey includes 22 Likert-style questions to measure the above-measured characteristics of pre-service teachers (refer to Appendix A), excluding questions focused on demographic information. The Likert scale offered options ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The responses were then categorized into three distinct domains: Cultural Awareness, Multicultural Teaching Skills and Knowledge, and Cultural Preparedness. Eight of the items assessed participants' cultural awareness (item 2; for example, “I understand the various communication styles among different ethnic students in my classroom”), nine questions measured participants multicultural teaching skills and knowledge (items 10; for example, “I make changes within the general school environment ethnic minority students will have an equal opportunity for success”) and three questions measured participants cultural preparedness (items 17; for example, “I feel that I am adequately prepared to teach in a rural area”).

In addition to assessing participants' multicultural teaching skills and knowledge, the cultural or ethnic awareness level of pre-service teachers, and the preparedness to teach in the Bawku municipality, the survey collected participants' demographic details essential to the study. Participants provided information such as their age and ethnic background. This comprehensive set of demographic inquiries aimed to enrich the dataset and provide contextual insights into the participants' backgrounds, potentially facilitating analysis of the relationship between the ethnic familiarity of pre-service teachers and the demographic profile of the respondents.

## **Treatment of Missing Data**

Survey errors can arise from various sources, including coverage, sampling, measurement, and non-response items. Non-response items occur when survey respondents provide incomplete information during data collection (Dong & Peng, 2013). Participants often overlook certain questions while responding to others, leading to gaps or missing data points within the dataset. According to Schafer and Olsen (1998), as cited in Dong & Peng (2013), non-response items can result from factors such as misunderstanding questions, reluctance to answer specific questions, or simply overlooking questions due to oversight or time constraints. The presence of missing data in research can lead to biased parameter estimates, loss of information, reduced statistical power, increased standard errors, and compromised findings (Dong & Peng, 2013). Addressing non-response items is vital to ensure the integrity and reliability of research findings, as they can affect the overall accuracy and representativeness of the collected data (Dong & Peng, 2013). Researchers employ various strategies to minimize non-response rates and handle missing data effectively, including follow-up communication with participants and statistical techniques for imputation.

In this study, I utilized the proportion of missing data strategy to address missing data issues. This approach involves analyzing the extent of missing data within the dataset by calculating the proportion or percentage of unanswered questions. Understanding the proportion of missing data assists researchers in evaluating the magnitude of missing data and determining appropriate actions. While there is not a universally accepted cutoff percentage for missing data in a dataset, Schafer and Olsen's (1998) principle, cited in Dong & Peng (2013), suggests that employing 3–5 missing data treatments can yield excellent results. Additionally, Schafer (1999)

argues that a missing rate of 5% or less is insignificant, providing further guidance on acceptable levels of missing data in statistical analyses.

A total of one hundred and twenty-three (123) participants answered the test items with varying degrees of completion of the questionnaire. Among them, sixteen (16) participants left six or more test items unanswered, excluding their responses from the dataset prior to analysis. The analysis proceeded with data from 107 participants who at least answered all the test items or left five or fewer items unanswered. Of these 107 participants, forty-three (43) were pre-service teachers from Peki College of Education, while the remaining sixty-four (64) participants were pre-service teachers from Gbewaa College of Education. Nity-six out of the one hundred and seven participants completed all the test items. However, among Peki and Gbewaa Colleges of Education participants, four (4) and seven (7) pre-service teachers, respectively, who left five or fewer items unanswered, were included in the final dataset. The average value for each item was used as a replacement to address missing data. This approach ensured the integrity and completeness of the dataset for analysis (Dong & Peng, 2013).

### **Informed Consent and Confidentiality**

I initiated the data collection process by seeking explicit permission from the college deans of both institutions. To facilitate this, an electronic copy of the Institutional Review Board (IRB) approval letter from Bowling Green State University and the questionnaire link was forwarded to the respective colleges' deans for their review and approval. The institutions engaged in a review process to comprehend the study's scope and objectives. Upon their review and approval, I received a signed letter from both colleges confirming their consent and participation in the study.

The survey was conducted using Bowling Green State University's Qualtrics platform, a widely utilized tool for administering online surveys. However, before participants were able to access the questionnaire, each potential respondent was required to acknowledge and fully comprehend the research objectives, thereby ensuring their informed participation and commitment to maintaining anonymity throughout the study. Explicit participant consent was obtained before engaging with the test items. Only those participants who willingly consented were allowed to progress and complete the survey, thereby upholding ethical standards and respecting the rights of the respondents. This approach underscores the importance of ethical considerations in research, emphasizing transparency, informed consent, and confidentiality as fundamental principles governing the conduct of the study. By adhering to these principles, the integrity and credibility of the research process are upheld, fostering trust and cooperation among participants while ensuring the validity and reliability of the data collected.

The survey was designed to collect limited demographic information, ensuring participants' confidentiality by not requiring personal identification or organizational details. This cautious approach was taken to protect the anonymity of respondents, as neither the researcher nor any authorized personnel had access to information that could reveal their identities. Furthermore, the data shared by participants was securely stored in a confidential electronic archive, accessible exclusively to the researcher. To uphold stringent privacy measures, all data will be expunged from both the file and the server upon the study's completion. I am committed to providing the completed research results and conclusions to each participant and the participating colleges upon request, ensuring transparency and openness in sharing the study's outcomes with those involved.

## **Data Analysis**

This study used t-tests as the statistical tool to examine pre-service teacher's cultural awareness, multicultural teaching skills and knowledge, and the level of their cultural preparedness to teach in Bawku municipality. The choice of a t-test as the analytical approach was based on its suitability for examining differences between pre-service teachers from Peki and Gbewaa Colleges of Education teacher's cultural awareness, multicultural teaching skills, and knowledge, and the level of their cultural preparedness. I employed this statistical tool in this study not only to ascertain whether a significant difference exists between teachers with varying levels of ethnic familiarity but also to determine the magnitude and direction of any observed differences. The t-test allowed for the comparison of mean scores of teachers' cultural awareness, multicultural teaching skills, and cultural preparedness between the two colleges of education. It gave the opportunity to investigate whether teachers who are highly familiar with the ethnic background of students in the Bawku municipality exhibit a greater willingness and tendency to teach within the municipality compared to those with less familiarity with the ethnic composition of the Bawku municipality. The t-test analysis sought to uncover potential disparities in teacher scarcity in the Bawku municipality attributable to differences in ethnic familiarity among pre-service teachers. In the t-test analysis, I used unequal variances to analyze the data. This is due to the uneven number of participants between the two colleges. In this study, Peki College of Education had forty-three (43) participants, while Gbewaa College of Education had sixty-four (64) participants. This discrepancy necessitated unequal variance in the statistical analysis to account for each institution's differing sample sizes appropriately.

I used descriptive statistics to complement the t-test analysis, which enhanced the interpretation of the results. The descriptive statistics included a detailed examination of the



ethnic and gender demographics of pre-service teachers enrolled in both colleges. By delving into these demographic factors, a more comprehensive understanding of the hypothesis under investigation was achieved, providing valuable context to the analytical findings.

### **Summary**

Chapter three provided a detailed overview of the methodological framework used in this study. It highlighted the rationale for using a quantitative research design and emphasized its suitability for the investigation at hand. The chapter also outlined the reasoning for selecting and adapting the Multidimensional Multicultural Teaching Competency Scale (MTCS) as the survey instrument. This chapter further delves into and discusses the population under study, the sampling strategy employed, and the methodologies for handling missing data. This chapter also justified the use of an unequal variance t-test for the data analysis.

## **CHAPTER IV. FINDINGS AND ANALYSIS**

### **Introduction**

Chapter four of this study provides a comprehensive analysis of the data obtained, offering insights into the research findings. A descriptive statistic and an unequal variance t-test analysis were performed to analyze the data and draw meaningful conclusions using the Statistical Package for Social Science (SPSS).

### **Demographic Characteristics of Pre-Service Teachers**

While maintaining the anonymity of respondents, the research delved into collecting fundamental demographic information, shedding light on the diverse composition of the participant pool. Gender and ethnicity variables were analyzed. The study acknowledged the complexity of individual ethnic identities by permitting respondents to select multiple options for the question aimed at collecting data on ethnicity. However, the research design deliberately omitted a follow-up question seeking clarification on these choices, as the primary objective was to comprehensively gauge the diversity within the respondent pool. The detailed breakdown of gender and ethnographic characteristics of the pre-service teachers of Peki and Gbewaa Colleges of Education are presented in Table 1 below.

*Research Question 1:***Table 1:***Demographics Data of Pre-Service Teachers of Gbewaa and Peki Colleges of Education*

Demographics	Response Category	Gbewaa College of Education		Peki College of Education	
		Frequency	Percentages	Frequency	Percentages
Gender	Male	29	45.31	23	53.49
	Female	25	54.69	20	46.51
	Prefer Not to Answer	0	0	0	0
Total		64	100	43	100
Ethnicity	Mole Dagbani	41	64.06	3	6.97
	Akan	13	20.31	10	23.26
	Ewe	0	0	28	65.12
	Ga-Adangbe	0	0	0	0
	Guan	5	7.81	0	0
	Others	5	7.81	2	4.65
Total		64	100	43	100

### **Ethnographic Data of Pre-Service Teachers in Gbewaa College of Education**

The above table shows the ethnographic landscape of pre-service teachers at Gbewaa College of Education. In this College, the dominant ethnic group was Mole Dagbon, accounting for 41 pre-service teachers, representing 64.06% of the total participants from the Gbewaa College of Education. The Akan ethnic group represented the second-largest group with a proportion of 20.31%, while Éwé and Ga-Adangbe had no representation among the study participants from this college. The Guan and other ethnic groups had five pre-service teachers each, representing 7.81% of the population at Gbewaa College of Education.

### **Ethnographic Data of Pre-Service Teachers in Peki College of Education**

The ethnic composition at Peki College of Education showed Éwé as the most prevalent ethnic group, with 28 representatives constituting 65.12% of the total college participants. Akan followed closely, representing 23.26%, while Mole Dagbon accounted for 6.98% with three pre-service teachers. Other ethnic groups among Peki College of Education pre-service teachers had two pre-service teachers, representing 4.65%. Notably, there was no representation from the Ga-Adangbe and Guan ethnic groups among Peki College of Education pre-service teachers who participated in the study.

*Research Question 2.* To what extent do pre-service teachers engage in interregional travel for teacher training?

**Figure 4**

*Ethnic Representations of Pre-Service Teachers Under Study in Percentage*

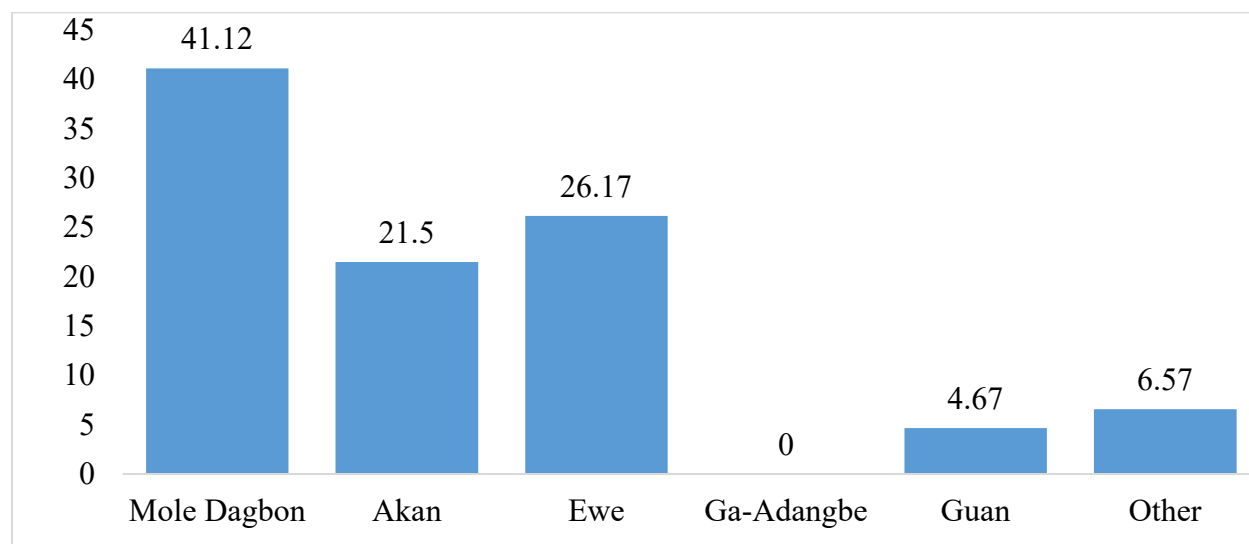


Figure 4 shows the cumulative ethnic representation of pre-service teachers who participated in the study, presented as percentages. Among the participants, forty-four (44) teacher trainees identified as belonging to the Mole-Dagboni ethnic group, made up 41.12% of the total participants. There were twenty-three (23) pre-service teachers from the Akan ethnic group, constituting 21.5% of the participants. The Éwé ethnic group was represented by twenty-eight (28) pre-service teachers, accounting for 26.17% of the total participants, while the Guan ethnic group had five (5) pre-service teachers, representing 4.67%. Notably, the Ga-Adangbe ethnic group had no representation in the study, while other ethnic groups collectively accounted for seven (7) pre-service teachers, comprising 6.54% of the total.

The ethnographic data of the pre-service teachers aligns with the regional demographic distribution reported by the Ghana Statistical Service (GSS) in the 2021 Population and Housing Census. The Mole-Dagbani ethnic group is predominant in Northern Ghana, while the Éwé are

predominantly found in the Volta Region in the country's southeastern part. This suggests a trend where pre-service teachers tend to enroll in colleges of education located within their home regions. However, it is noteworthy that the Akan ethnic group, traditionally associated with regions such as Ashanti, Ahafo, Bono, Eastern, and Western Regions, displayed a significant presence in this study, indicating a willingness among Akan individuals to enroll in colleges of education outside their traditional regions.

### **Geographic Data of Pre-Service Teachers in Gbewaa and Peki Colleges of Education**

Understanding the complexities of the geographical and ethnic dynamics among pre-service teachers at both institutions contributes to a more enriched perspective on the study participants' diverse backgrounds and demographic makeup. In the 2023 cohort of pre-service teachers affiliated with both Colleges of Education who actively participated in this study, the regional distribution revealed that 48 teacher trainees are from Northern Ghana (Upper East Region, Upper West Region, Savannah Region, North-East Region, and Northern Region). Four out of the forty-eight pre-service teachers are from Northern Ghana; however, they are not affiliated with the dominant ethnic group in the region (Mole Dabgon). Seventeen out of the twenty-three Akan pre-service teachers are from the Akan-dominated regions (Ashanti Region, Ahafo Region, Eastern Region, Western Region, and Central Region). Six pre-service teachers who are in the Akan ethnic group are, however, from Oti Region (2) and Greater Accra (4). Thirty pre-service teachers are from the Volta region, of which twenty-eight are Ewe and two Guan pre-service teachers. Three out of the five pre-service teachers belong to the Guan ethnic group from the Greater Accra Region, and two pre-service teachers categorized as other ethnic groups are also from the Greater Accra region. The maps (Figures 5 and 6) below show the

pictorial representations of the major ethnic groups in Ghana and the regional map of Ghana, respectively.

**Figure 5**

<sup>4</sup>*A Pictorial Representation of the Major Ethnic Groups in Ghana.*



<sup>4</sup> This map was downloaded from <https://maps-ghana.com/ghana-tribes-map>



**Figure 6**

<sup>5</sup>*The Regional Map of Ghana*



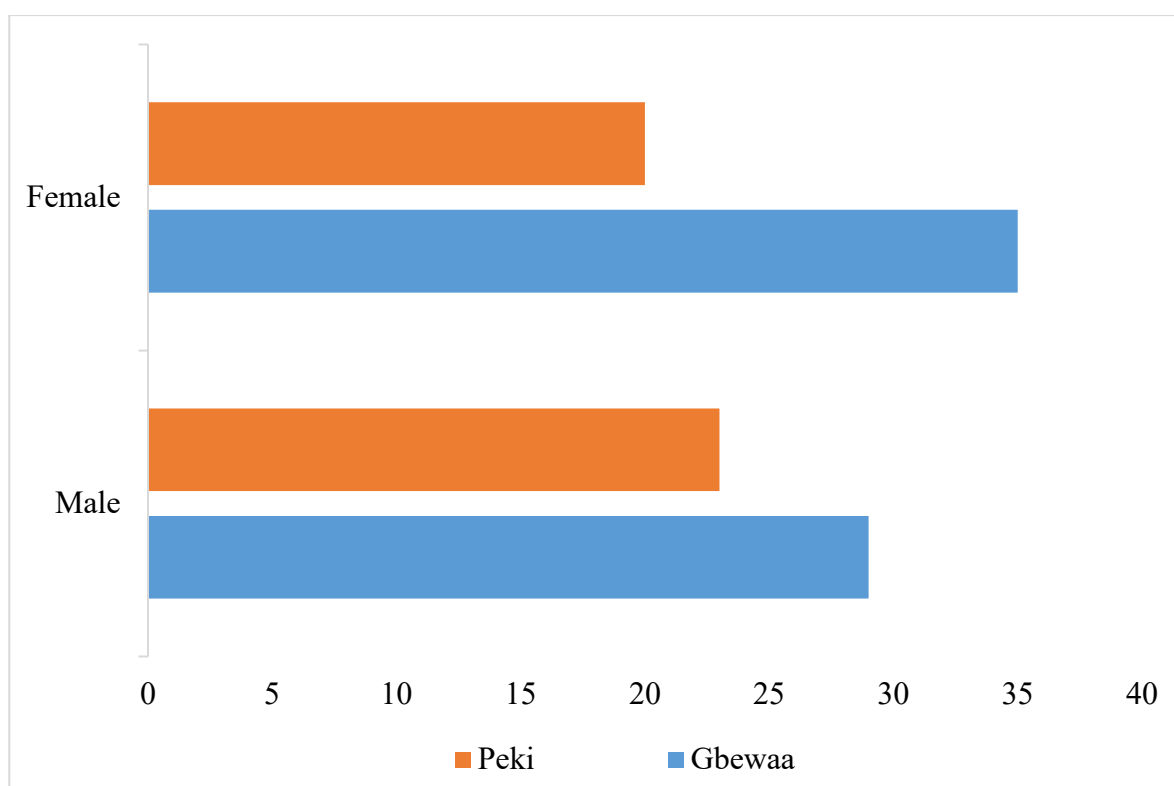
<sup>5</sup> This map was downloaded from <https://mfa.gov.gh/index.php/about-ghana/regions/>

### Gender Representation Pre-Service Teachers in Gbewaa and Peki Colleges of Education

It is important to note that while Gbewaa College of Education had the highest number of female participants, totaling 35 pre-service teachers and accounting for 54.69% of the total participation from the college, Peki College had a higher male representation, with 23 male participants accounting for 53.49% of the total participants from the College. The study had a total of 55 female pre-service teachers' participation. The significant variation in gender distribution between the two Colleges of Education complicates the study's demographic dynamics. Understanding the interplay between geography, race, and gender within the sample enriches the study's results, providing a more comprehensive perspective on the diverse backgrounds and characteristics of the pre-service teachers.

**Figure 7**

*Gender Comparison of Pre-Services Teachers from Gbewaa and Peki Colleges of Education*



*Research Question 3: What are the preferred teaching settings among pre-service teachers?*

**Table 2:**

*Distribution of Pre-service Teachers Preferred Place of Teaching*

Preferred Teaching Settings	Gbewaa College of Education					Peki College of Education				
	1st Choice	2nd Choice	3rd Choice	Total	Rank Based on 1st Choice	1st Choice	2nd Choice	3rd Choice	Total	Rank Based on 1st Choice
Small Town/Rural	44(68.75)*	11(17.19)	9(14.06)	64	1	21(48.84)	12(27.91)	10(23.26)	43	1
Town	7(10.94)	41(64.06)	16(25.00)	64	3	13(30.23)	26(60.47)	4(6.35)	43	2
City	13(20.31)	12(18.75)	39(60.94)	64	2	9(20.93)	5(11.63)	29(67.44)	43	3
Total	64(100)	64(100)	64(100)			43(100)	43(100)	43(100)		

\*Percentages in parentheses

Table 2 illustrates the preferred choices of pre-service teachers in response to question 20, which inquired about their desired teaching location after graduating college. The options provided were (a) Small town/rural, (b) Town, and (c) City. At Peki College of Education, 21 pre-service teachers (48.84%) selected (a) Small town/rural as their top choice for teaching after graduation. Thirteen individuals, representing 30.23% of pre-service teachers from Peki College of Education, opted for (b) Town as their primary preference, while nine individuals (20.93%) chose (c) City as their preferred teaching location. Among those who initially selected either (b) Town or (c) City as their top choice, eleven out of twenty-two pre-service teachers (50%) from Peki College of Education listed (a) Small town/rural as their second option. At Gbewaa College of Education, the majority of pre-service teachers, forty-four individuals (68.75%), chose (a) Small town/rural as their primary teaching location. Seven pre-service teachers (10.94%) selected (b) Town as their preferred choice, while thirteen individuals (20.31%) indicated (c) City as their top preference. Among those who initially chose (b) Town or (c) City, 55% and 45% respectively, selected (a) Small town/rural as their secondary option.

**Table 3**

*Distribution of Pre-Service Teachers' Perceived Factors That Contribute to Student's Success*

Options	Gbewaa College of Education		Peki College of Education	
	Frequency	Rank	Frequency	Rank
Student's home background	15(23.44)*	2	17(39.53)	1
Student's intellectual ability	18(28.12)	1	5(11.63)	4
Student's enthusiasm or perseverance	7(10.94)	5	5(11.63)	4
Teacher's attention to the unique interests and abilities of	14(21.88)	3	10(23.26)	2
Teacher's use of effective methods of teaching	10(15.63)	4	6(13.95)	3
Total	64		43	

\*Percentages in parentheses

Table 3 presents the distribution of pre-service teachers' perceived factors contributing to student success. At Gbewaa College of Education, most respondents (28.12%) attributed student success to a student's intellectual ability. Following closely, students' home backgrounds received a percentage score of 23.44%, positioning it as the second most attributed factor to student success. Teachers' attention to student's unique interests and abilities, teachers' use of effective teaching methods, and students' enthusiasm or perseverance followed with

percentage scores of 21.88%, 15.63%, and 10.94%, respectively. On the contrary, at Peki College of Education, the predominant factor believed to contribute to student success is the student's home background, with 39.53% of respondents. 23.26% of pre-service teachers at Peki College identified the teacher's attention to students' unique interests and abilities as the most frequent factor associated with student success. While 13.95% believe teachers' use of effective teaching methods is the most attributed factor to student success, 11.63% are of the view that success is attributed to students' enthusiasm or perseverance and students' intellectual ability.

**Table 4***Distribution of Pre-Service Teachers' Perceived Factors That Contribute to Student's Failure*

Options	Gbewaa College of Education		Peki College of Education	
	Frequency	Rank	Frequency	Rank
Student's home background	17(26.56)*	2	15(34.88)	1
Student's lack of intellectual ability	3(4.68)	5	6(13.95)	4
Student's indifference or lack of perseverance	12(18.75)	3	8(18.60)	3
Teacher's failure to consider the unique interests and abilities of students	23(35.94)	1	13(30.23)	2
Teacher's failure to use effective methods of teaching	9(14.06)	4	1(2.33)	5
Total	64		43	

\*Percentages in parentheses

Table 4 presents the factors pre-service teachers perceived as contributing to student failure. Among the pre-service teachers surveyed from Gbewaa College of Education, 35.94% identified the primary factor contributing to student failure as the teacher's failure to consider students' unique interests and abilities. 26.56% attributed student failure to their home background, while 18.75% cited students' indifference or lack of perseverance. 14.06% and 4.68% of respondents identified teachers' failure to use effective teaching methods and students'

lack of intellectual ability as significant factors contributing to student failure respectively.

According to the perceptions of pre-service teachers at Peki College of Education, a significant proportion believe that a student's home background is the leading contributing factor to student failure, with 34.88% of respondents expressing this viewpoint. This is closely followed by the belief that a teacher's failure to cater to students' unique interests and abilities contributes significantly to student underperformance, with 30.23% of respondents acknowledging this factor. A considerable portion of respondents identified student indifference or lack of perseverance (18.60%) and student's lack of intellectual ability (13.95%) as contributing factors to student failure. A minority of respondents attributed student failure to a teacher's failure to utilize effective teaching methods, with only 2.33% acknowledging this aspect.

### **Hypothesis Testing**

The mean score of pre-service teachers of Gbewaa College of Education on cultural awareness, cultural preparedness, and multicultural teaching skills and knowledge was compared to that of pre-service teachers of Peki College of Education using a t-test as the statistical tool.

Table 5 summarizes the t-test result.



**Table 5**

*T-Test Summary of Pre-Service Teachers' Cultural Awareness, Cultural Preparedness, and Multicultural Teaching Skills and Knowledge*

College of Education	N	M	SD	t-value	df	p-value	Sig. Value
Cultural Awareness							
Gbewaa	64	4.3	0.53	0.21	105	0.83	0.87
Peki	43	4.28	0.59				
Cultural Preparedness							
Gbewaa	64	4.09	0.86	0.15	105	0.3	0.38
Peki	43	3.89	1.05				
Multicultural Teaching Skills and Knowledge							
Gbewaa	64	3.92	0.68	0.77	105	0.44	0.99
Peki	43	3.83	0.62				

***Hypothesis Test 1: Cultural Awareness***

H<sub>0</sub>: There is no significant difference in the level of cultural awareness among pre-service teachers from the Peki and Gbewaa Colleges of Education.

An independent sample t-test was conducted to compare the cultural awareness of pre-service teachers of Gbewaa College of Education (M = 4.30, SD = 0.53) and Peki College of

Education ( $M = 4.28$ ,  $SD = 0.59$ ). The results revealed no statistically significant difference in cultural awareness scores between pre-service teachers at Gbewaa and Peki Colleges of Education:  $t(105) = 0.21$ ,  $p = 0.83$ .

### ***Hypothesis Test 2: Cultural Preparedness***

$H_0$ : There is no significant difference in cultural preparedness between preservice teachers of Peki and Gbewaa Colleges of Education.

A t-test was conducted to examine the difference in cultural preparedness between pre-service teachers at Gbewaa College of Education ( $M = 4.09$ ,  $SD = 0.86$ ) and Peki College of Education ( $M = 3.89$ ,  $SD = 1.04$ ). The independent samples t-test results indicated in Table 5 revealed no statistically significant difference in cultural preparedness between pre-service teachers at Gbewaa and Peki Colleges of Education,  $t(105) = 1.05$ ,  $p = 0.15$ .

### ***Hypothesis Test 3: Multicultural Teaching Skills and Knowledge***

$H_0$ : There is no significant difference in the multicultural teaching skills and knowledge among pre-service teachers enrolled at Peki and Gbewaa Colleges of Education.

Table 5 shows a t-test conducted to investigate whether there is a significant difference in the multicultural teaching skills and knowledge of pre-service teachers of Gbewaa College of Education ( $M = 3.92$ ,  $SD = 0.58$ ) and Peki College of Education ( $M = 3.83$ ,  $SD = 0.62$ ). The independent samples t-test results revealed no statistically significant difference in pre-service teachers' multicultural teaching skills and knowledge between Gbewaa and Peki Colleges of Education,  $t(105) = 0.77$ ,  $p = 0.44$ .

## **Implications of the Research Findings**

The descriptive statistics analysis provides insight into the cultural awareness levels of pre-service teachers from Gbewaa and Peki Colleges of Education. The ethnic and geographic distribution of pre-service teachers across both colleges reveals a tendency for aspiring pre-service teachers to enroll in colleges located within their home regions. Within the curriculum of colleges of education, pre-service teachers are mandated to undertake Ghanaian Language and Culture courses, typically amounting to a minimum of three (3) credits. These courses predominantly focus on one or, at most, two of the sixteen institutionalized Ghanaian languages, aligning with the linguistic diversity of the regions. This factor significantly influences college selection, as prospective pre-service teachers often prioritize institutions that offer instruction in their native language and culture. The disparity in the distribution of colleges of education between the southern and northern regions implies that prospective pre-service teachers from the south enjoy greater accessibility to enrollment opportunities compared to their counterparts from the north. As a result, individuals from the South face less stringent competition when seeking admission into colleges of education, whereas those from the North contend with limited and highly competitive chances of enrollment. These challenges end the dreams and the educational pursuit of potential pre-service teachers from the northern part of the country who are academically qualified to enroll in a college of education but denied admission because of the limited colleges in the region. It was observed that a significant proportion of pre-service teachers belonging to Akan ethnic groups are enrolled in both colleges of education. This phenomenon can be attributed to the inclusion of "Twi," an Akan language and culture course, in the curriculum of both institutions, alongside the predominant language and culture of their respective locations.

The calculated mean scores indicate that pre-service teachers from Gbewaa College of Education achieved a slightly higher cultural awareness mean score (4.30) compared to their colleagues from Peki College of Education (4.28). The standard deviation scores offer an indication of the spread of scores around the mean. In this regard, both colleges exhibit standard deviation scores that are relatively close to their respective means. This result suggests a higher level of consistency and similarity in terms of cultural awareness among pre-service teachers in both colleges. Based on the non-significant p-value (0.83), there is no substantial difference in the cultural awareness of pre-service teachers between Gbewaa and Peki Colleges of Education. These findings imply that factors other than college affiliation may significantly impact the cultural awareness levels of pre-service teachers. The statistics of the cultural preparedness of Gbewaa College of Education ( $M = 4.09$ ,  $SD = 0.86$ ) and Peki College of Education ( $M = 3.89$ ,  $SD = 1.04$ ) show a slightly different mean score for pre-service teachers. This difference is statistically insignificant since the observed t-value of 1.05 did not reach statistical significance at the alpha level of 0.05. Given the non-significant p-value (0.15), there is no significant difference in the cultural preparedness of pre-service teachers of Gbewaa and Peki Colleges of Education. These findings suggest that factors other than college affiliation may contribute more significantly to differences in cultural preparedness among pre-service teachers. Data analysis for the standard deviations shows that Peki College of Education (0.86) and Gbewaa College of Education (1.05) are closer to their respective mean scores. This suggests a consistent level of cultural preparedness among pre-service teachers across both institutions. However, Gbewaa College of Education stands out for its lower standard deviation score of 0.86, indicating a higher degree of consistency in cultural preparedness among its pre-service teachers than pre-service teachers at Peki College of Education.

Per the calculated t-value of multicultural teaching skills and knowledge, both colleges had slightly different mean scores; Gbewaa College of Education ( $M = 3.92$ ,  $SD = 0.58$ ) and Peki College of Education ( $M = 3.83$ ,  $SD = 0.62$ ). This difference is statistically insignificant since the observed t-value of 0.77 did not reach statistical significance at the alpha level of 0.05. Given the non-significant p-value (0.44), there is no significant difference in the cultural preparedness of pre-service teachers of Gbewaa and Peki Colleges of Education. The closeness of the standard deviation of both colleges suggests that the pre-service teachers across these colleges consistently possess Multicultural Teaching skills and knowledge. However, pre-service teachers of Peki College of Education stand out for having the lowest multicultural teaching skills and knowledge among the two colleges. These findings suggest that factors other than college affiliation may contribute more significantly to variations in multicultural teaching skills and knowledge among pre-service teachers.

### **Summary of Results**

The descriptive statistics reveal a slight difference in mean scores and standard deviation of the variables under study, cultural awareness, cultural preparedness, and multicultural teaching skills and knowledge, between pre-service teachers at Gbewaa and Peki Colleges of Education. Gbewaa College of Education demonstrates a slightly higher level of cultural awareness, cultural preparedness, and multicultural teaching skills and knowledge than Peki College of Education. The narrower standard deviation observed among pre-service teachers of both colleges suggests a more consistent level of cultural awareness among its pre-service teachers, potentially indicating a more standardized pre-service teaching curriculum.

## CHAPTER V. CONCLUSION

The findings of this study show that the pre-service teachers in both colleges of education are aware of the existence and importance of multicultural education for students in achieving the intended goal. While 39.53% of the pre-service teachers from Peki College of Education believe students' success is largely attributed to their home background, 28.12% of the pre-service teachers in Gbewaa believe students' educational achievement is attributed to their intellectual ability. On the contrary, 34.88% of the pre-service teachers believe that when students fail to achieve their academic goals, the most common attributed factor is the student's home background, while preservice teachers from Gbewaa are the teacher's failure to consider the unique interests and abilities of students. The aforementioned attributed factors to the success or otherwise of the intended educational goals necessitate the call for teachers to understand the cultural dynamics of students. Understanding the cultural dynamics of students means understanding their home background, highlighting the importance of multicultural education. The findings of this study shows that the two colleges of education instilled in pre-service teachers multicultural teaching skills and knowledge that made pre-service teachers culturally aware of learners' backgrounds. This affirms the agreement put forth by Bleicher (2011) and Davis et al. (2010), who contend that pre-service teachers receive sufficient multicultural education to enable them to be culturally responsive in diverse teaching settings. However, the findings show that pre-service teachers prefer teachers in the geographic region they are familiar with. This finding suggesting that pre-service teachers in both colleges are not pedagogically equipped to teach students from diverse linguistic and cultural backgrounds because they did not receive the requisite training. As Mulkeen (2010) opines, most teacher education programs in the sub-Saharan region need to prepare pre-service teachers with multicultural teaching skills and

knowledge who could effectively and efficiently practice in an unfamiliar cultural setting. This finds on the preference of teachers in where they will like to teach, could be because pre-service teachers lack the language and cultural competency of other indigenous ethnic groups.

Lenski et al. (2005) assert that the primary aim of multicultural education is to highlight and address oppression and social injustices in our educational system stemming from factors such as race, religion, disability, social class, and gender. This research findings shows that the pre-service teachers are equipped with the skills to adjust the teaching and learning environment to accommodate minority students in their classrooms but are not pedagogically prepared to adjust themselves to fit in the different cultures. This is the reason why most pre-service teachers practice in their home region. Chang et al. (2011) identifies reflection and service learning as two crucial factors necessitating comprehensive cultural awareness training and multicultural teaching skills and knowledge among pre-service teachers for effective functioning in diverse teaching environments. The former is a practice the colleges of education consider in their pre-service teacher education. The latter is also a practice used to instill cultural awareness and multicultural teaching skills and knowledge in pre-service teachers. However, this study shows that the pre-service teachers in both colleges are culturally prepared to accommodate minoritized students in their classrooms but are not culturally prepared to teach in entirely different regions where the cultures of learners are different from their own. According to Carter (2009), service learning as a strategy for training pedagogically and culturally responsive teachers is crucial to effective and efficient practice in an entirely different culture. It involves pre-service teachers immersing themselves in multicultural settings. The training module of the colleges of education makes provisions for pre-service teachers to immerse themselves into the cultural practices of the place where the college of education is located. This is made possible when the pre-service

teachers take mandatory off-campus teaching practices. Pre-service teachers are posted in the final year of teacher education to train at schools in the district where the college of education is located or the neighboring district. During this period, pre-service teachers gain practical experience teaching under the mentorship of in-service teachers. This study has shown that more than three-quarters of pre-service teachers in both colleges of education are from the regions where the colleges are located. Therefore, the essence of Service-Learning is rendered ineffective as the pre-service teachers are already familiar with the locality's language, customs, and traditions, which is intended to instill the cultural awareness of different ethnic groups in pre-service teachers.

The study has shown that the majority of the pre-service teachers from both colleges, Gbewaa 68.75% and Peki 48.84%, prefer to start their teaching career in rural and deprived settings. This is a good indication of bridging the educational divide between the rural and urban areas. However, these pre-service teachers prefer their home region. Peki, located in the Volta Region of Ghana, is the region with the highest number of colleges of education and literacy rate of children between 14-24 years old, more than the national average literacy rate, while Gbewaa in the Bawku East in the Upper East Region had a literacy rate below the national literacy rate. If this trend continues, there is no hope of improving the quality of teaching in the Bawku West district and many similar places where teachers' services are most needed. This calls for innovative measures to address the scarcity of teachers in the Bawku West district. This study has shown that colleges inculcate and train teachers with multicultural teaching skills and knowledge. However, it is essential to point out that multicultural teaching skills and knowledge or cultural awareness do not merely mean recognizing groups in school and adjusting the learning environment for students' success; teachers must also understand and adjust themselves



to teach in unfamiliar learning environments. According to Chang et al. (2011), service learning combines services that align with learning objectives and deliberate reflection to expose pre-service teachers to the needs of society. The off-campus teacher's education module could be the panacea for training culturally responsive teachers and reimagining the teacher education module like the University for Development Studies (UDS) trimester program that aims at fostering cultural responsiveness, multicultural skills, and cultural awareness among its graduates. The program, which operates on a trimester system, is designed to provide students with a comprehensive understanding of diverse cultures, traditions, and perspectives, thereby preparing them to thrive in an increasingly globalized world. Unlike off-campus teaching practices, the UDS trimester program considers students' demographic backgrounds when assigning them to various localities. The UDS trimester program emphasizes experiential learning and community engagement. Through service-learning projects, students can immerse themselves in local communities, interact with diverse populations, and gain firsthand knowledge of different cultural practices and traditions (Mohammed et al., 2018).

### **Recommendations for Future Research and Stakeholders in Education**

For future research attempts focusing on teacher scarcity within the Bawku Municipality of the Upper East Region of Ghana, it is imperative to explore this issue through the lens of security concerns. The persistent conflicts surrounding chieftaincy disputes and the prevailing state of insecurity in the region present an important yet understudied aspect that could shed light on the complexities underlying the scarcity of teachers in Bawku. Understanding the intersection between security challenges and educational staffing issues is crucial for devising effective solutions to address teacher scarcity in this area. The impact of ongoing chieftaincy disputes and the broader context of insecurity in the region reveal significant contributing factors to the

scarcity of primary school teachers in Bawku. By delving into the socio-political dynamics and their implications for educational provision, researchers can uncover multifaceted factors that influence teacher recruitment, retention, and deployment in this specific context. This holistic approach will not only enhance our understanding of the challenges faced by teachers in Bawku but also inform the development of targeted interventions and policies aimed at addressing teacher scarcity and improving educational outcomes in the municipality.

To gain a comprehensive understanding of teacher scarcity in the Bawku Municipality, it is recommended that future researchers employ alternative research methodologies, such as qualitative or mixed-method approaches. These methodologies can provide deeper insights into the underlying causes and dynamics of teacher scarcity by allowing researchers to interview and explore various stakeholders' experiences.

The analysis of demographic data of teacher trainees shows a noteworthy trend that warrants further examination. It is evident that pre-service teachers exhibit a strong preference for pursuing their higher education within their home region and end up teaching in the same region. This trend implies a lack of intra-regional movement among prospective teachers. Such a pattern poses significant challenges for the Ghanaian government, as it hampers the Ministry of Education's efforts to address teacher scarcity across various country regions. To effectively tackle this issue, I propose the establishment of additional colleges of education, specifically in regions marked by a severe scarcity of teachers, such as the Upper East region. By strategically expanding the higher education infrastructure in these underserved areas, the government can directly address the scarcity of trained teachers. The creation of new colleges of education in targeted regions would not only enhance accessibility to quality teacher training but also foster regional development and promote and enhance the literacy rate in the region. By offering native

students the opportunity to pursue their education without having to relocate to distant regions, this initiative would foster a sense of community engagement and encourage the retention of teachers in the locality.

Implementing targeted recruitment drives to attract teachers to rural areas is crucial to addressing the educational disparities between urban and rural areas. As proposed by UNESCO, incentives such as housing assistance, bonuses, career advancement opportunities, and special allowances can help attract and entice qualified teachers to consider teaching in these underserved areas. This approach recognizes the unique challenges faced by rural communities in accessing quality education. It seeks to bridge the gap by ensuring highly skilled teachers are available where they are most needed. The literature reviewed for this study shows that rural areas suffer from teacher scarcity due to interconnected factors, including lack of infrastructure and/or limited resources. By specifically targeting recruitment efforts towards these regions, the Ministry of Education can bring methodologically talented teachers into Bawku. The Ministry of Education, creating a partnership with the Ministry of Works and Housing and the Ministry of Local Government, can help improve one of the main concerns teachers may have about relocating to rural areas. The Ministry of Works and Housing can partner with the Ministry of Local Government and Rural Development to provide decent and affordable accommodation for teachers in underserved regions like Bawku. However, while this may attract teachers, the lack of essential skills to effectively and effectively teachers in such areas will lead to high attrition in the district. Therefore, adapting the University for Development Studies trimester system is the most effective and efficient way. When the off-campus teaching practice is modified like the UDS trimester program, this will help train culturally responsive teachers with multicultural skills and knowledge and cultural awareness skills. The off-campus teaching practice when

modified, will allow authorities of the colleges of education to place pre-service teachers to unfamiliar communities to immerse themselves in the cultural practices of the community.

Developing effective retention strategies is crucial in addressing the issue of high teacher turnover rates in rural postings. These strategies should aim to create an environment that encourages teachers to stay, feel valued, and develop a sense of belonging in their communities. One such strategy is to provide professional development opportunities to enhance teachers' skills and knowledge. By offering relevant and ongoing training, teachers can feel supported in their professional growth, which can increase job satisfaction and motivation to remain in their rural postings. Officials of the Ghana Education Service (GES) who approve teachers who are not qualified for reposting should be subject to disciplinary action. Those in positions of authority at the Ghana Education Service (GES) must adhere strictly to the stipulated guidelines and standards governing the reposting of teachers. When officials disregard these protocols and approve teachers who are not qualified for transfer, their action not only compromises the quality of education provided to students but also undermines the integrity of the Ghana Education Service. Therefore, to uphold the principles of fairness, professionalism, and educational excellence, stringent measures must be in place to hold accountable those who deviate from the prescribed procedures. Enforcing sanctions against such actions sends a clear message that adherence to standards with respect to promoting equity in education is non-negotiable in the recruitment and deployment of teachers. This fosters trust in the education system and ensures that only competent and qualified individuals are entrusted with the important task of shaping the minds of future generations. Moreover, career advancement opportunities should be available to teachers who work in remote regions like Bawku. This will recognize their dedication and hard work and encourage other teachers to consider teaching in rural areas, knowing there are

opportunities for professional growth and development. By supporting teachers in their career progression, Ghana Education Service can ensure a sustainable teaching workforce in Bawku.

**Limitation**

One significant limitation of this study is the narrow scope of data collection, which was confined to just two out of the forty-six public colleges of education in Ghana. Expanding the research to include a larger sample of colleges could have provided a more comprehensive understanding of ethnic awareness of teachers and the scarcity of teachers in Bawku.

Additionally, the literature review highlights the Akans as the largest ethnic group in Ghana, with teachers from this region often exhibiting cultural responsiveness. With this in mind, I initially aimed to include a college from the Eastern Region, one of the Akan regions. However, despite my efforts, I encountered challenges in obtaining approval from the college and did not receive any feedback following my initial contact. As a result, I had to select Peki College of Education for the study. Unfortunately, by the time I received approval to commence my research, the pre-service teachers at Peki College had already completed their teacher education, resulting in a lower than anticipated number of participants from this institution.

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## APPENDIX A. INSTRUMENT

1=Strongly Disagree 2=Disagree

3=Not sure

4=Agree

5=Strongly Agree

- |  |  |
|--|--|
| <p>1. _____ I will plan many activities to celebrate diverse cultural practices in my classroom.</p> <p>2. _____ I understand the various communication styles among different ethnic students in my classroom.</p> <p>3. _____ I will consult regularly with other teachers or administrators to help me understand multicultural issues related to instruction.</p> <p>4. _____ I have a clear understanding of culturally responsive pedagogy.</p> <p>5. _____ I often include examples of the experiences and perspectives of ethnic groups during my classroom lessons.</p> <p>6. _____ I will plan school events to increase students' knowledge about cultural experiences of various racial and ethnic groups.</p> <p>7. _____</p> <p>8. _____ I am knowledgeable about racial and ethnic identity theories.</p> <p>9. _____ My curricula integrate topics and events ethnic minority populations.</p> <p>_____ I am knowledgeable of how historical experiences of various ethnic minority groups may affect students' learning.</p> <p>10. _____ I make changes within the general school environment ethnic minority students will have an equal opportunity for success.</p> | <p>11. _____ I am knowledgeable about the teaching strategies that affirm the ethnic identities of all students.</p> <p>12. _____ I rarely examine/ will examine the instructional materials I use in the classroom for racial and ethnic bias.</p> <p>13. _____ I will integrate the cultural values and lifestyles of ethnic minority groups into my teaching.</p> <p>14. _____ I am knowledgeable about the various community resources within the city that I teach.</p> <p>15. _____ I will often promote diversity by the behaviors I exhibit.</p> <p>16. _____ I will establish strong, supportive relationships ethnic minority parents.</p> <p>17. _____ I feel that I am adequately prepared to teach in a rural area.</p> <p>18. _____ I will accept teaching posting in Bawku after completing college.</p> <p>19. _____ The main job of the teacher is to transmit the values of the mainstream Ghanaian culture.</p> <p>20. _____ In which of the following settings would you prefer to work?</p> <p style="margin-left: 40px;">a) Small town/rural</p> <p style="margin-left: 40px;">b) Town</p> <p style="margin-left: 40px;">c) City</p> |
|--|--|

21. \_\_\_\_\_ When students are successful in achieving intended goals or objectives, that success is often attributed to one of the following sources of success? (Choose one.)

- a) Student's home background
- b) Student's intellectual ability
- c) Student's enthusiasm or perseverance
- d) Teacher's attention to the unique interests and abilities of students
- e) Teacher's use of effective methods of teaching

22. \_\_\_\_\_ When students fail to achieve intended goals or objectives, that failure is often attributed to one of the following sources. Which do you believe is the most frequent source of failure? (Choose one.)

- a) Student's home background
- b) Student's lack of intellectual ability
- c) Student's indifference or lack of perseverance
- d) Teacher's failure to consider the unique interests and abilities of students
- e) Teacher's failure to use effective methods of teaching

23. What is your gender?

- a. Male
- b. Female
- c. Prefer not to disclose

24. What is your ethnicity? \_\_\_\_\_

25. What is your age? \_\_\_\_\_

26. Where are you from? \_\_\_\_\_

27. What is your major program of study?

- a. General
- b. Maths and Science
- c. Technical Education
- d. Early Childhood Education
- e. Other

28. What is your expected year of graduation?

\_\_\_\_\_