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Assessing the Impact of Educational Policy Reforms on Pre-Service Teacher Education in Ghana: A Qualitative Inquiry

[*1]Arnold Amasiya Asanga, [2]Asaah Rachael Awinebolom

Authors' first Affiliation: Zhejiang Normal University

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Abstract: **The present research aimed at investigating the impact of educational policies on pre-service teacher education in Ghana by specifically exploring how the introduction of reforms such as the 1987 Educational Reforms, Free Compulsory Universal Basic Education, Ghana Education Trust Fund, and National Teacher Standards has influenced the structure of the curriculum, pedagogical practices, adoption of ICTs, and institutional capacity. In the current study, the qualitative research methodologies were used, with the involvement of interviews, focus group discussions, and analysis of documents in the chosen colleges of education and universities. Based on the results derived, credit has to be given to reform policies, which have brought a lot of changes in teacher education. Competency-based curriculum, learner-centred pedagogies, ICTs integration, inclusion, extended practicum, and national teaching standards have marked teacher education. Adopted in teacher education methods include group work, inquire based learning, journal writing, micro-teaching and heavy use of ICT among others. The ICT adoption has helped to develop Pedagogical skills of pre-service teachers, although it has not been used consistently since access and provision of infrastructures to facilitate its use remains a problem. Institutional capacity results in disparities in assistance albeit through the Ghana Education Trust Fund and this is primarily blamed on disparities between the rural and urban.**

Keywords: **Educational policy reforms; pre-service teacher education; pedagogical practices; institutional capacity; Ghana.**

1. INTRODUCTION

The educational sector in Ghana has gone through several changes with time, owing to some past factors as well as due to its necessity to conform to worldwide trends. Formal education was first seen during the era of colonial rule where the British created an educational structure that aimed at educating a few people in order to work for their administration (Osei-Owusu, 2022). After Ghana gained its independence in 1957, various efforts were initiated to foster inclusiveness and equal access to education in Ghana. This is evident through the introduction of the FCUBE policy in 1996. As a result, the enrollment levels in educational institutions were significantly increased. Nonetheless, this growth also brought with it several issues, including a lack of infrastructure, funds, and trained teachers (Quainoo et al., 2021).

Over the last few decades, Ghana has been concentrating on expanding access to education and enhancing its quality. The education system has been organized into three tiers, namely, basic education, secondary education, and tertiary education (Abudu et al., 2025a). Teacher education is one of the critical components that have helped the nation realize its education objectives at both local and international levels (Akor et al., 2025; Ussif, 2025).

To improve teacher quality, Ghana has introduced reforms such as the National Teacher Standards (NTS), which define the competencies required of teachers and guide professional development (Ananga, 2021). Despite these efforts, challenges persist, including limited funding, insufficient practical training, and a gap between theory and classroom practice.

Educational policy reforms, including the 1987 Education Reform, the Free Compulsory Universal Basic Education (FCUBE) policy, and the Ghana Education Trust Fund (GETFund), have significantly shaped teacher education (Bediako, 2019). These reforms aimed to improve curriculum relevance, expand access, and enhance teacher training. However, increased enrollment has also placed pressure on resources, raising concerns about maintaining quality (Abudu et al., 2025a).

Teacher training in Ghana occurs mostly via Colleges of Education and higher learning institutions like universities. Although they play an important role in teacher training, they encounter various difficulties, including a lack of adequate resources, outdated curriculum, among others. Therefore, solving these problems is necessary (Annan, 2020; Hayford & Asare, 2025).

Recent reforms have also influenced curriculum development by promoting student-centred approaches, practical training, and the integration of Information and Communication Technology (ICT) (Osei-Owusu, 2022). These changes aim to equip teachers with the skills needed to meet the demands of modern classrooms (Osei-Owusu, 2022).

Ghana's educational system has evolved through a series of reforms aimed at improving its efficacy and effectiveness. Nonetheless, there are still issues within the educational system that need improvement. It is essential to examine the effects of reforms in educational policies on the development of future teachers in Ghana to ensure quality education in today's world. Therefore, this qualitative inquiry seeks to examine the effects of reforms in educational policies on pre-service teacher education in Ghana.

1.1 Problem Statement

Although many educational policy reforms have been introduced in Ghana over the years, especially in teacher education policies, very few empirical studies have been conducted to assess the impact of these reforms on teacher preparation. Some of the important reforms include the 1987 Education Reform Policy, the FCUBE policy and the introduction of GETFund to improve the quality of education through teacher preparation. It is important to establish how much these reforms have contributed towards the process of preparing teachers, especially concerning their knowledge of teaching curriculum and methods (Abudu et al., 2025a; Quainoo et al., 2021).

There is thus a huge gap in the literature regarding how effective these reforms have been. There is a possibility that educational policymakers are implementing new policies without knowing whether they are working or not. Since the quality of teachers plays an important role in the achievement of learning goals among students, it is important to know how much impact these policies have had on teacher preparation (Annan, 2020; Hayford & Asare, 2025).

In addition to this, most of the research conducted in the past has mainly concentrated on general issues like access to education, enrollment in schools, and school infrastructure without paying enough attention to the process of teacher training. What is more important, however, is that there has been no attempt to involve some of the important stakeholders, like teacher educators, prospective teachers, and school administrators (Osei-Owusu, 2022).

This research, therefore, aims at addressing this issue by focusing on the impact of educational policy reforms on the pre-service education of teachers in Ghana. It would help provide useful information that can be used to develop policies in the future.

1.2 Research Questions

1. How have major educational policy reforms (such as the 1987 Educational Reforms, FCUBE, GETFund, and National Teacher Standards) influenced the structure and content of pre-service teacher education curricula in Ghana?
2. In what ways have these policy reforms shaped pedagogical practices and teaching approaches used in the preparation of pre-service teachers?
3. How have educational policy reforms affected institutional capacity in Colleges of Education and universities, particularly in terms of resources, infrastructure, and professional development opportunities for teacher educators?

2. LITERATURE REVIEW

Reforms in educational policies in Ghana have impacted pre-service teacher training in Ghana for many years now, especially in areas such as curriculum development, pedagogy, and capacity building (Abudu et al., 2025a). The major reforms include the 1987 Education Reform, the FCUBE, the GETFund, and NTS. All these reforms aimed at improving

the availability and quality of education to meet the needs of national development in accordance with its priorities (Abudu et al., 2025b; Biney, 2019a). Majorly, they were informed by a desire to correct inequalities in access to education and ensure that teacher training leads to competent teachers who can handle the demands of a developing education sector (Osei-Owusu, 2022). As a result, they have had an impact on teacher training programs in Colleges of Education and universities in Ghana.

One of the most significant effects that these reforms have had on is the curricula of pre-service teacher education programs (Abudu et al., 2025b). Indeed, the structural changes made by the 1987 Education Reform included an emphasis on science, technology, and vocational education, among other areas (Biney, 2019b). Also, there was a need to improve teacher training to boost instructional effectiveness (Biney, 2019b). Likewise, the FCUBE reform led to more people accessing basic education and, consequently, increased the number of teachers required in schools (Biney, 2019b; Buabeng et al., 2020). Consequently, Ghana now practices degree-based teacher education that involves a competency-based curriculum, which focuses on subject mastery and practical teaching experience (Buabeng et al., 2020). This change follows the trend towards the development of 21st-century skills like critical thinking, effective communication, and ICT literacy (Annan, 2020). Nonetheless, there are still issues related to ensuring uniformity in curriculum delivery and evaluating whether the required competencies are developed adequately.

Apart from curriculum changes, education policy reforms have equally affected pedagogy in teacher education institutions. In the past, pedagogy in Ghana was largely teacher-centred and relied on memorization and theory-oriented instructions (Yidana, 2026). Through reforms like the National Teacher Standards (NTS), the focus has been on encouraging teacher educators to apply pedagogies such as learner-centred approach, inclusive education, and reflective teaching pedagogies (Nkrumah et al., 2026). Moreover, the use of Information Communication Technology (ICT) has been encouraged to help pre-service teachers acquire relevant skills in teaching the new generation learners (Osei-Owusu, 2022). However, there exists a gap between what policy reformers expect and what happens in the classroom, as some teacher educators continue to apply traditional ways of lecturing due to large class sizes and a lack of proper resources, among others. Therefore, there is a need to investigate the actual impact of education policy reforms on pedagogical practices.

Reforms in education in Ghana have greatly affected teacher education, improving the institutional capacity of Colleges of Education and universities through such programs as GETFund, which has improved infrastructural and learning resources and professional development for teachers, and TEDP, which has improved training quality and coordination through the establishment of degree-granting teacher education programs (Biney, 2019a; Buabeng et al., 2020). Although there have been improvements as a result of reforms, colleges still experience challenges such as inadequate funds, higher student-to-facilitator ratios, limited availability of modern facilities, and disparities between urban and rural institutions. Research shows that reforms such as FCUBE have greatly contributed to education access and better institutional infrastructure, and the National Teacher Standards have made it possible to establish competencies in teacher education and promote competency and technological based training of pre-service teachers (Abedi et al., 2024). However, several areas remain unclear in relation to curriculum implementation, whether trainees acquire competencies required in reforms, pedagogy employed by teacher educators, differences in institutional capacity and resources, and stakeholder perspectives such as those of educators, trainees, and college administrators. Thus, educational policy reforms in Ghana resulted in important changes concerning the curricula, pedagogies, and institutional capacities for preparing competent teachers. However, much remains unclear about their implementation. Therefore, the purpose of this study is to investigate the impact of educational policy reforms on pre-service teacher education in Ghana.

2.1 Theoretical foundation

This study was guided by Fullan's Change Theory and Social Constructivist Theory. Fullan's Change Theory explains educational reform as a complex process shaped by interactions between policy, practice, and contextual factors, emphasizing that successful implementation depends on institutional capacity, teacher engagement, and system-wide support (Fullan, 2016). In this study, it helps to explain variations in how educational policy reforms are implemented across Colleges of Education in Ghana, particularly in relation to differences in resources, staffing, and institutional readiness. Social Constructivist Theory, rooted in the work of Vygotsky, posits that learning is an active, social process where knowledge is constructed through interaction, collaboration, and reflection (Bruner, 1996; Vygotsky, 1978) (, 1978; Bruner, 1996). This theory underpins the shift toward learner-centred pedagogy in pre-service teacher education, including group work, inquiry-based learning, micro-teaching, reflective journals, and practicum experiences that promote learning through guided practice. Together, these theories provide a complementary framework for understanding both the implementation dynamics of educational reforms and the pedagogical transformation occurring in Ghana's teacher education system.

3. METHODS AND MATERIALS

3.1 Research Design

For the study, a qualitative descriptive research design was used to study the experiences and perceptions of teacher educators and pre-service teachers concerning educational policy reforms in Ghana. The selection of such a research design was due to the need for an in-depth understanding of teacher educators' and pre-service teachers' interpretations of reform. This methodology emphasised collecting narratives from individuals who played direct roles in implementing the reform agenda. It facilitated the analysis of policies, curriculum changes, and pedagogic practices that affected their day-to-day experiences.

3.2 Study area

The research was carried out in six regions of Ghana, including Ashanti, Greater Accra, Northern, Central, Eastern, and Volta, to provide an inclusive and representative study region that reflects the various environments. The six regions selected provided both urban and rural regions and institutions with varying resources, which assisted the study in examining the differences in educational reforms within various environments.

3.3 Population and Sampling

The target population included teacher educators, administrators, and pre-service teachers selected from some Colleges of Education and Universities in Ghana because they had direct participation in teacher education and educational reforms. Teacher educators were important in teaching and training processes, pre-service teachers being the main beneficiaries of the policies, while administrators facilitated implementation of the policies. Thus, it was important to get the opinions of all three groups in order to gauge the effects of the reforms. Purposive sampling was employed in selecting participants who were knowledgeable about reforms and had experienced the effects of the policy changes. The sample included participants from rural and urban institutions to account for different resource levels. The total sample size was 65, which was based on the concept of information power (Malterud et al., 2016). It was the most appropriate sampling method for this study since qualitative data collection is concerned with getting in-depth data, not generalizing results.

3.4 Data Collection Techniques

Semi-structured in-depth interviews, focus group discussion (FGD), and document analysis were some of the techniques used to collect data for the research. In particular, semi-structured interviews were carried out among the respondents to learn about their personal experience of introducing new policies and their difficulties. The participants included teacher educators and administrators whose experience and perceptions about FCUBE, GETFund, and National Teacher Standards reform were analyzed. FGD was employed to identify collective experience of pre-service teachers regarding changes in the curriculum, pedagogy, and classroom readiness, especially regarding using ICT and promoting inclusive education. Additionally, document analysis was performed on policy documents such as the 1987 Education Reform Policy, FCUBE Policy, and the GETFund Act.

To improve the data gathering process, two research assistants were hired and underwent training in various aspects, such as qualitative data gathering methods, ethics in data gathering, interviewing skills, taking notes, and ensuring consistency in data gathering procedures. This was important in order to ensure that the process was standardized at all points of data gathering.

3.5 Reflexivity and researcher positioning

The role of reflexivity and researcher positionality in data collection and analysis was also considered by acknowledging any personal biases that might affect the process (Berger, 2015). Reflections were carried out to ensure that the subject's opinions were accurately captured. These ethics served to meet research standards and improve validity.

3.6 Data Analysis

Thematic analysis was adopted, as proposed by (Braun & Clarke, 2023), with the following six steps: getting familiar with the data, coding, theme identification, theme review, theme definition, and writing the final report. Thematic analysis is an effective way to identify, analyse, and report patterns within qualitative data. This method allowed for a deeper examination of the experiences, views, and interpretations of the respondents with regard to the reform of educational policies in Ghana. Thematic analysis involves the identification of key themes in the material gathered from interviews, focus group discussions, and document analysis. Through inductive coding, data were grouped into categories and themes that were

related to the research problem. The codes were generated repetitively to include all data related to the research question. This technique provided a more accurate representation of the experience of teacher educators, school administrators, and pre-service teachers concerning teacher education reforms in Ghana.

3.7 Trustworthiness

The trustworthiness of the research in this study was established using the concepts of credibility, dependability, transferability, and confirmability (Stahl & King, 2020). Credibility was ensured through the triangulation of the source of data, which involved interviews, focus group discussions, and document analysis, as well as member checking to validate the accuracy of the participants' opinions. The concept of dependability was guaranteed by keeping an audit trail throughout the entire research process. Transferability was ensured by describing the research setting and the respondents in a rich manner. Finally, confirmability involved conducting the analysis process in a way that reflected the participants' information.

3.8 Ethical Considerations

Strict ethical guidelines were followed during the course of research to maintain its authenticity and provide adequate safety for all subjects involved in the study. The principle of informed consent was followed, where complete information regarding the research process and objectives was provided to the participants, and they were made aware of their voluntary participation in the study. They were allowed to withdraw from the research process at any time without facing any adverse effects. All personal information was removed and replaced with pseudonyms to ensure anonymity.

4. RESULTS/FINDING

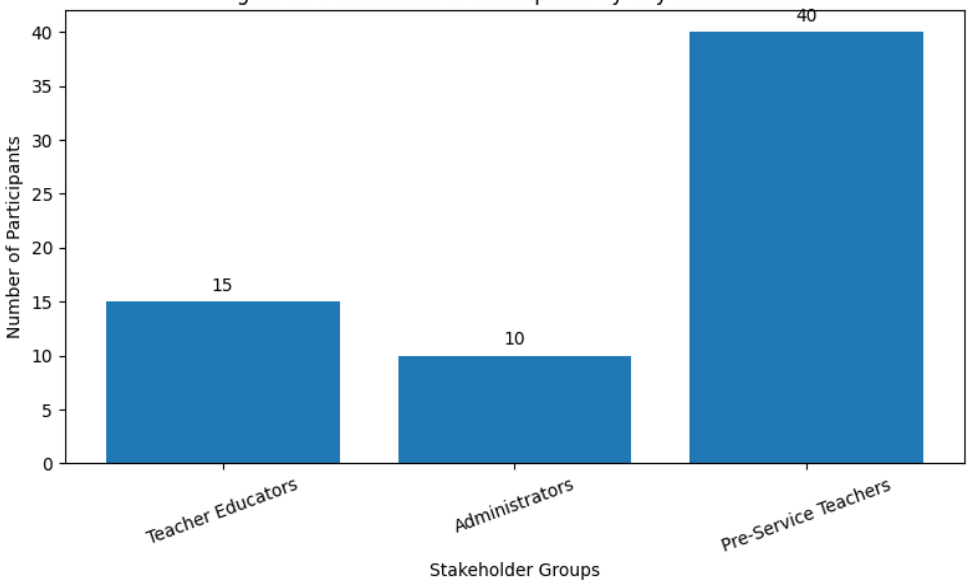
Socio-demographic background of participants

In this study, teacher educators, administrators, and pre-service teachers were included, giving different perspectives on the reforms taking place within educational policies in Ghana. Teacher educators were fifteen Master's and PhD holders with five to twenty-eight years of experience. Teacher educators were mostly drawn from colleges of education and universities and had been involved in the implementation of curricula, teaching methodology and supervisory roles for teaching practice (practicum). Administrators were ten participants, who were vice principals, heads of departments, deans, and quality assurance officers with ten to thirty-five years of experience, giving different views concerning policy implementation and managerial processes in colleges of education and universities from various regions. Furthermore, forty pre-service teachers aged nineteen to twenty-six years took part in this study. The group consisted of students undertaking diploma courses and Bachelor of Education (200 level – 400 level). The elaborate demographic trends demonstrated in Table 1, as well as the cerebral representation illustrated in Figure 1, provide a clear base through which to understand the thematic results in further chapters of this chapter

Table 1: Participant Demographics Summary

Participant Group	Code Range	Total (N)	Gender (M/F)	Age Range	Highest Qualification	Years of Experience	Institution Type	Region
Teacher Educators	TE01–TE15	15	09-Jun	32–58	M.Ed (7), M.Phil (6), PhD (2)	5–28 yrs	Colleges of Education (10), Universities (5)	Ashanti, Greater Accra, Northern
Administrators	AD01–AD10	10	07-Mar	38–62	M.Ed (4), M.Phil (3), PhD (3)	10–35 yrs	Public Colleges (8), Universities (2)	Central, Eastern, Volta
Pre-Service Teachers	PST01–PST40	40	18/22	19–26	Diploma (20), B.Ed (20)	N/A	Level 200–400	All regions
TOTAL	—	65	34/31	—	—	—	—	—

Figure 1: Distribution of Participants by Key Stakeholders



4.1 Themes and subthemes

Theme analysis conducted according to (Braun & Clarke, 2023) led to the identification of four major themes related to reforms in teacher education in Ghana. The first theme is the Influence of Educational Reforms on Curriculum Structure, which involves curriculum changes such as the adoption of National Teacher Standards, ICT, a competence-based approach, inclusive education, and varying practice teaching approaches, among others. The second theme is Transformation in Pedagogical Practices, which refers to the change from teacher-centred to learner-centred methods of teaching and learning, and an increase in group work and reflective practice, among others. The third theme is Integration of ICT in Teaching and Learning. The use of ICTs in teaching and learning has been growing inconsistently. The final theme is Differences in Institutional Capacity and Resources Available

Table 2: Main themes and sub-themes

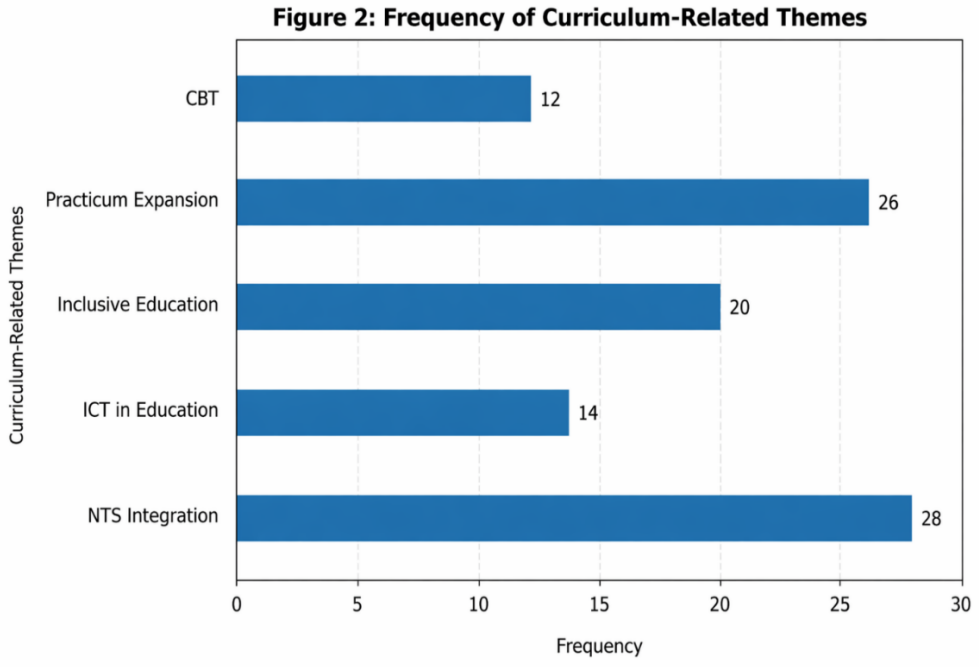
Main Theme	Sub-Themes
1. Influence of Educational Reforms on Curriculum Structure	• Implementation of National Teacher Standards across institutions • ICT integration in teacher education • Inclusion of inclusive education and competency-based training • Increased practicum duration across institutions • Mismatch between policy intent and actual implementation due to resource and staffing gaps
2. Pedagogical Practice Transformation	• Shift from teacher-centred to learner-centred pedagogy • Increased use of group work, inquiry-based learning, and reflective journals • Growth in structured micro-teaching and assessment practices • Increased but inconsistent ICT use in teaching • Enhanced pedagogical competence of pre-service teachers through practicum and reflection
3. ICT Integration in Teaching and Learning	• Gradual increase in ICT use for teaching and learning activities • Limited integration into classroom instruction due to infrastructure constraints • Use of ICT mainly for presentations and micro-teaching • Digital divide between well-resourced and under-resourced institutions
4. Institutional Capacity and Resource Availability	• Variation in infrastructure such as libraries, ICT labs, internet connectivity, and teaching materials • Influence of GETFund-supported infrastructure improvements • Staffing shortages and increased workload without proportional support • Limited formal training for staff on reforms • Persistent rural–urban inequalities in institutional capacity and resources

4.2 Influence of Educational Reforms on Curriculum Structure

One important theme identified in the data was the fact that educational reforms had greatly affected the structure of curricula frameworks within teacher education colleges in Ghana. The participants frequently referred to several reforms, such as the NTS, competence-based training, the use of ICTs, and curriculum reconstruction in colleges of education and universities. While the level of implementation was not always consistent among the institutions, the effects were felt both structurally and at the classroom level. Table 3 below depicts the prevalence of the various curricula-related themes that emerged from the discussions and interviews conducted.

Table 3: Curriculum Changes Reported Across Institutions

Reform Component	Institution A	Institution B	Institution C	Institution D	Institution E	Evidence from Participants	Implementation Level
National Teacher Standards (NTS)	Fully integrated into courses	Partially integrated	Fully integrated	Not fully implemented	Fully integrated	TE04, TE10, AD03	High–Mixed
ICT in Education	2 compulsory ICT courses added	1 course + practicum ICT use	Limited computer access	No computer lab	Full digital literacy module	PST05, TE12	Low–Moderate
Inclusive Education	Added new module	Module merged with pedagogy	No module	Introduced guest seminars	Full course + practical tasks	TE02, PST17	Low–High
Practicum Hours Increase	12 weeks	8 weeks	12 weeks	4 weeks (resource constraint)	16 weeks (model college)	PST09, AD06	Low–Very High
Competency-Based Training (CBT)	Adopted	Adopted	Not adopted	Pilot stage	Adopted	TE01, TE07	Mixed



4.2.1 Curriculum Post policy reform changes.

The results indicated that NTS was highly adopted in most of the institutions, especially in Institutions A, C, and E, where its adoption was complete. Nonetheless, the report revealed partial adoption in Institution D owing to resource and staff inadequacies.

"With NTS, it became possible to give a beginning to having the teacher education programme in a way that would correspond with how the country expected professionalism, teaching abilities, and dispositions from its teachers." (AD03, Male, 16 years of experience, Institution C)

The adoption of ICT varied across institutions, with some having functional laboratories for ICT and organised ICT training for PSTs, while others encountered difficulties in ICT adoption, such as the availability of obsolete equipment and poor internet connection. The introduction of inclusive education and CBT took place, although their adoption varied. Some institutions incorporated inclusive education and CBT fully, while others adopted them partially or on a pilot scale. NTS and practicum reforms were more commonly adopted than ICT and CBT because of institutional differences.

"The disparity between these factors made it possible for us to establish the degree of confidence that the pre-service teachers had in using technology in class." (TE12, Female, 10 years of experience, Institution A.)

4.2.2 Increased Practical Component

Extended practicums became one of the core curriculum reforms introduced in pre-service teacher education at all the participating universities in Ghana. Institutions like A, C, and E have reported increasing the time spent on practicums to 12 to 16 weeks for students to be able to interact with classroom situations more, learn lesson planning, classroom management, assessment, and professional cooperation skills. This is evident from statements made by the participants.

"Longer periods of practice allowed them to decide on a particular student and give their feedback based on their classroom experiences." ." (TE12, Female, 13 years of experience, Institution C.)

Teachers and trainees alike have expressed their opinions about how practicums can be considered the vital link between theory and practical experience. Inconsistent practicum quality was noticed because of poor supervisory structures, logistics, and lack of partnership with schools, especially among some institutions . The expansion of practicums was another area that emerged from Figure 2 as one of the most commonly cited reforms, which highlights its importance within curricular reforms. In general, even though curricular reforms in the form of practicums have improved practical experience, problems in their implementation necessitate better coordination and mentoring.

"Through the practicum, we managed to link theory with classroom practice in ways that lectures could not." (PST05, Male, 3 years of study, Institution B.)

4.2.3 Mismatch Between Policy Intent and Implementation

The findings further indicated that the National Teacher Standards had been adopted by all institutions except institution D which did not have enough resources and staff readiness for adoption. The National Teacher Standards had been incorporated within the curriculum, assessment and practicum processes in institutions A, C and E. This can be evidenced by several statements from participants confirming the clarity of

"National teacher standards offered clarity on what competencies the graduating teachers ought to demonstrate." TE02, Female, 5 years of experience, Institution D.

On the other hand, information and communication technology integration within the curriculum had varying levels of adoption. Some institutions had ICT laboratories that were well equipped, while others suffered from a lack of adequate computers and poor internet connection, thereby hindering the development of ICT skills amongst the trainees. As indicated in one of the statements from the study participants.

"*Availability of ICT facilities impacted negatively the level of confidence of students in preparing and delivering lessons."* (ADO6, Male, 15 years of experience, Institution A.)

Lastly, the level of adoption of inclusive education and competency-based training varied in different institutions as there were pilot programs as well as partial adoptions of the reforms.

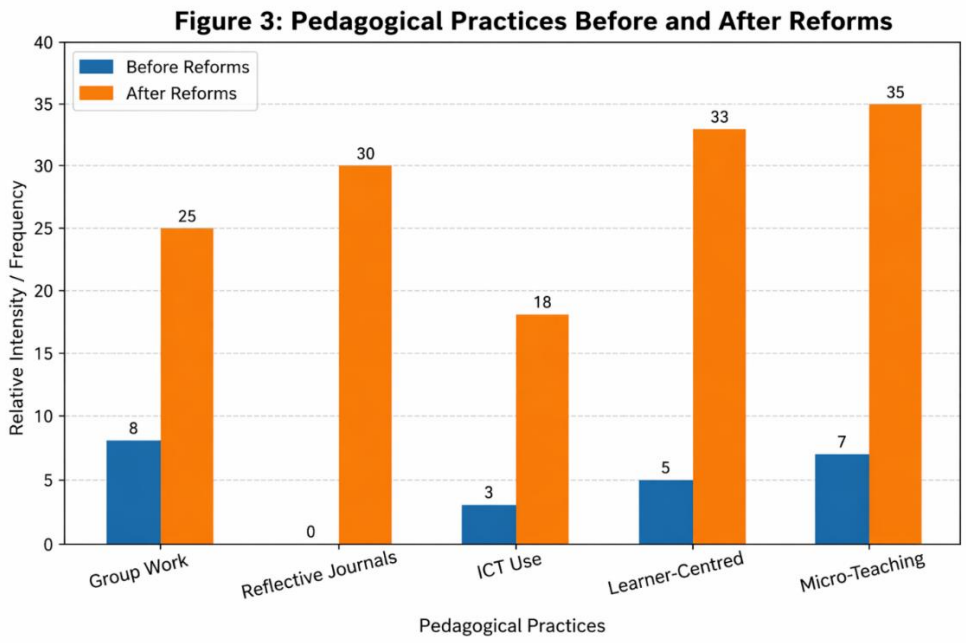
4.3 Pedagogical Practice Impact

The second important theme that emerged in the collected data concerns changing pedagogical practice in institutes for teacher education as a result of implementing the reforms in the national context. As the respondents pointed out, there is an important transformation taking place concerning the nature of the teaching methodology, shifting from the traditional teacher-centred approach to the more interactive and reflective pedagogies. This is a crucial aspect because pedagogy serves as the main tool for carrying out reforms, and students get accustomed to new approaches through this practice. Table 3

presents an overview of the key pedagogical practices of teachers and learners with regard to the frequency of their use prior to and after the reforms. These aspects combined show the way the process of reform has affected the teaching and learning process, as well as the fact that barriers still exist.

Table 4: Emergent Pedagogical Practices Before and After Reforms

Pedagogical Indicator	Before Reforms	After Reforms	Frequency Mentioned by Educators	Frequency Mentioned by PSTs	Illustrative Quote Code
Group Work	Occasional	Frequent & structured	12	25	TE03; PST11
Reflective Journals	None	Required weekly	10	30	PST22
Use of ICT in Lessons	Rare	Increasing but inconsistent	8	18	TE08
Learner-Centred Methods	Minimal	Strong emphasis	14	33	TE15; PST04
Lecture-Only Teaching	Dominant	Reduced but not eliminated	9	27	PST01
Micro-Teaching Sessions	Informal	Structured assessment	11	35	AD02



4.3.1 Move towards Learner-Centred Pedagogy

One other crucial finding is the move to learner-centered instruction among pre-service teacher education programs, whereby participants reported an increase in the application of collaborative activities, inquiry learning, projects, and reflection strategies. As indicated in Table 3, collaborative activities featured prominently during interviews and discussions, whereas reflective journals received considerable emphasis from teacher educators as valuable instructional techniques that fostered the development of critical thinking and reflection skills, which had been somewhat underemphasized prior to reforms. This move was highly associated with the impact of the National Teacher Standards that advocate for learner-centered and reflective instructional approaches. As reflected by participant observations;

"…Many teacher educators have now expressed confidence in applying interactive instructional strategies". (ADO3, Male, 9 years of experience, Institution B.)

Whereas pre-service teachers have noted that;

*"Learning had become increasingly engaging through collaborative and reflection exercises". (*PST01, Female, 2 years of study, Institution C.)

Nevertheless, the adoption of learner-centered instructional practices has not been universal, as some teachers are experiencing difficulties in employing such practices owing to large class sizes of more than 30 pupils and insufficient classroom space.

4.3.2 ICT Integration in Teaching

Another significant pedagogical change that occurred as a consequence of the reform is the adoption of ICT into teaching processes. The respondents confirmed an increasing use of computers and different types of multimedia, presentations, and internet resources by several pre-service teachers and other education specialists who found some improvements in this respect after implementing the reform. Nevertheless, the application of ICT still varies from one institution to another.

*"Use of ICT is limited only to presentation preparation and micro-teaching but not for classroom integration." (*AD01, Female, 14 years of experience, Institution D.)

It was pointed out by many respondents that there is often a discrepancy between the policy and real practice due to various reasons like obsolete computers, lack of access to computer laboratories and stable connection to the internet. Due to all of the above mentioned factors, ICTs were used mostly for microteaching or preparing presentations, but not as much as incorporated in teaching itself.

*"Inadequate computer labs and inadequate internet connection hinder the process of integrating ICT into teaching-learning process." (*TE06, Male, 11 years of experience, Institution A.)

4.3.3 Perceived Growth in Pedagogical Competence

It is worth noting that there was an improvement in the pedagogical competence of pre-service teachers in light of increased practicum experiences, micro-teaching training, and reflection. Improved micro-teaching led to increased competency in areas such as lesson preparation, classroom management, and lesson delivery. Also, feedback sessions and reflective journal writing were found to play a very important role in helping pre-service teachers enhance their pedagogical practices and gain self-consciousness of their teaching skills. There were also increased instances of using learner-centred pedagogies and ICTs in lesson delivery. This was clearly reflected in the different statements from different participants:

"*Expanded practicum and structured micro-teaching have significantly improved pre-service teachers' confidence in classroom management and lesson delivery." (*TE11, Male, 18 years of experience, Institution B.)

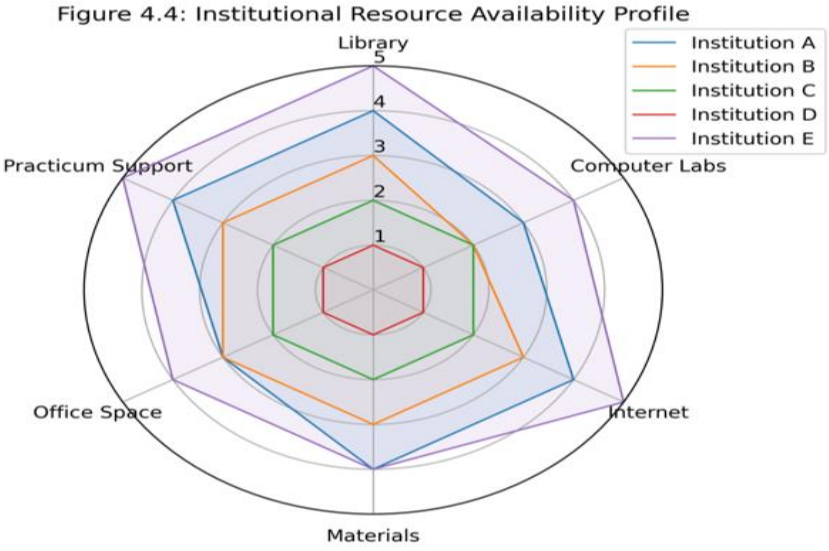
While issues like low ICT literacy and large class sizes remain as obstacles, efforts made so far have been instrumental in developing pedagogical competence among pre-service teachers in Ghana.

4.4 Institutional Capacity and Resource Availability

The capacity of institutions became another important variable that affected the process of implementing reforms within the Colleges of Education and university systems. Although there were noticeable changes regarding the curriculum and instructional methodologies, the effectiveness of these efforts greatly depended on other underlying variables such as the institution's infrastructure, faculty and staff development, and resources. It was observed that institutions with improved infrastructure and learning materials performed better when it came to implementing reforms than those institutions that had suffered from long-standing limitations. As seen in Table 4, there are visible differences in the capacity of institutions and the allocation of resources that have led to inconsistencies in the implementation of reforms.

Table 5: Institutional Resource Availability Comparison

Resource Indicator	Institution A	Institution B	Institution C	Institution D	Institution E	Notes from Administrators	Resource Level
Library Facilities	Modern digital library	Small library	Outdated books	No library	New building via GETFund	AD04, AD07	Low–High
Computer Labs	1 lab (45 PCs)	1 lab (20 PCs)	10 old PCs	No lab	2 labs (60 PCs)	AD01	Low–High
Internet Access	Stable broadband	Moderate	Unstable	None	Strong fibre connection	AD02	Very Low–High
Teaching Materials	Adequate	Moderate	Limited	Very limited	Adequate	AD05	Low–High
Staff Office Space	Shared offices	Adequate	Crowded	Very poor	Modern offices	AD06	Very Low–High
Practicum Support	Strong partnerships	Moderate	Weak	Very limited	Strong	AD09	Low–High



4.4.1 Improved infrastructure through GETFund support

Developing infrastructures and the support from the Ghana Education Trust Fund was perceived as one of the key elements that made the implementation of education reforms successful. According to some of the responses given by students and teachers at Institutions A and E, some of the developments made included the establishment of new libraries, lecture halls, ICT infrastructure that were also internet-enabled. These improvements helped to enhance the learning process by offering a conducive environment for the ICT and competency-based teaching practices. Similarly, the teacher educators benefited from the developed infrastructures since this made them efficient in the preparation of lessons using ICT facilities. This point is supported by several statements, such as:

*"Improvement in infrastructures enabled teacher educators to deliver ICT-based lessons efficiently." (*TE02, Female, 13 years of experience, Institution B.)

On the other hand, some challenges existed in the effective usage of these facilities even after the improvements made. These include poor maintenance, insufficient ICT support, and internet access amongst others.

4.4.2 Constraints in staffing and training

Although infrastructural facilities had been enhanced, there were still some challenges in terms of the number of staff and training of personnel. Educators in colleges of education indicated that they had an increased workload as a result of demands for reform, such as competency-based training, supervisory functions during practical work, and increased assessment activities. However, this increase was not accompanied by any changes in terms of staffing. In addition, some institutions were facing problems such as lack of adequate office space and crowding within offices. Although administrators recognized the necessity for the use of new methodologies and documentation in response to reforms, they did not give any guidance or training to help educators adjust to this change. Therefore, most of the teacher educators relied on self-learning in the field of ICT and inclusive education. One statement among many from different participants was as follows:

*"Most teacher educators depended on self-teaching to adapt to ICT integration and new instructional requirements." (*TE12, Male, 15 years of experience, Institution D.)

These factors caused work pressure and made it difficult for educators to give timely feedback to prospective teachers. Some educators had become competent through personal experiences but this was insufficient.

4.4.3 Persistent Resource Inequalities

One of the most important subtheme realized during the research process was the consistent disparity in resource availability among various institutions, especially rural vs. urban Colleges of Education. Institutions such as C and D mentioned several problems related to out-of-date libraries, lack of ICT tools and connectivity, as well as inadequate training and support

services, which made the successful implementation of educational innovations more difficult. At the same time, institutions such as A and E had enough resources available for them to adopt ICT integration and competency-based approaches more easily.

*"Resource differences between rural and urban institutions greatly affected reform implementation and learning effectiveness." (*AD01, Female, 7 years of experience, Institution B.)

To sum up, it can be stated that the problem of infrastructure inequality has both logistical and structural dimensions, since it affects the overall performance and the quality of teacher preparation in colleges of education. This means that policy reforms can be expected to produce inconsistent results contingent upon the institutional context of their implementation..

5. DISCUSSION

Education reform has brought significant changes to the educational curriculum through national standards for teachers, ICT integration, competence-based learning, inclusivity, and increased practicum exposure. Reforms in countries such as Tanzania and Kenya have been geared towards implementing competence-based curricula alongside ICT integration to encourage learner-centric teaching methods. Research in Kenya indicates that teachers appreciate the benefits of ICT in achieving competence-based education and good teaching practices (Murithi & Yoo, 2021). Likewise, in Tanzania and Sub-Saharan African nations, reforms in teacher education have concentrated on enhancing ICT pedagogical integration and competence-based learning (Shayo & Mnyanyi, 2023).

Conversely, research conducted in Asia and Europe reveals a greater degree of institutional preparedness for effective implementation of curricular reforms, especially concerning integration of ICT and competence-based education. For example, research conducted in China shows that curricular reforms have focused on developing competence in a structured manner, reflecting and incorporating ICT as an important dimension of professional teacher development (Chen & Murray, 2026). Likewise, curricular reforms in Europe suggest that while there are no issues regarding infrastructure and availability of resources, the difficulties now arise in transforming teaching methods and providing ongoing professional development (Ngao et al., 2022). Nevertheless, reforms in these regions do not necessarily mean that all teachers possess equal competencies due to unequal professional development opportunities (Grgić & Bolliger, 2025).

In general, reforms in Africa mainly focus on building the basic infrastructures and training of teachers. In contrast, Asian and European countries concentrate more on implementing teaching methods. The global trend for reforms involves increasing practical skills and competency-based training, which depends on context readiness. This means that in Ghana, priority should be given to investments in teacher training colleges, ICT infrastructure, and professional development. This is necessary since reforms will help learners develop the required competencies, promote inclusive learning, and integrate ICT technology.

The transformation of pedagogical practice in Ghanaian pre-service teacher education can be viewed against the backdrop of a worldwide trend towards competence-centered instruction through collaborative efforts, inquiry-based teaching and learning, reflection diaries, well-structured micro-teaching, and ICT usage. The above trend resonates with the principles advocated for in Ghana's National Teacher Education Curriculum Framework, where there is emphasis on reflective and student-centered pedagogy (National Teacher Education Curriculum Framework – T-TEL, 2017). Literature on Ghana demonstrates that while the pre-service teachers are increasingly being exposed to the above strategies in their training process, classroom implementation varies significantly owing to inadequate resources, large classroom sizes, and poor mentoring during practical experience (Abudu et al., 2025b; Buabeng et al., 2020). The success rate of reforms differs internationally. Countries such as Singapore and China have school-university collaboration, microteaching, and ICT incorporation that facilitate learner-centred approaches to teaching (Aleksieva, 2025; Yang et al., 2023). In the Nordic systems, including Finland, extended teaching practice, teacher freedom, and reflective practice constitute crucial elements of quality teacher training programs (Haarala-Muhonen et al., 2023). Worldwide, microteaching and reflective practices are instrumental in improving teacher competence, where their implementation is thorough, while ICT usage is not only restricted to presentations (Haarala-Muhonen et al., 2023; Iliasova et al., 2025).

Although Ghana has achieved significant progress in matching its pre-service teacher education with the principles of learner-centred and ICT-based pedagogy, the match is incomplete compared to that in Asia and Europe. The reason for this can be attributed to the variations in terms of the capability of institutions and mentors, as well as the availability of resources. At the local level, this calls for Ghana to make efforts to enhance pedagogical reform through better supervision during the practicum process, continuous mentoring in the partnering schools, ICT provision at Colleges of Education, and improved capability of the teacher educators in adopting learner-centred and reflective pedagogies.

The transformation of pedagogical practices in Ghana's pre-service teacher education has seen a move towards learner-centered practices such as group activities, inquiry-based teaching, reflection journals, and micro-teaching, among others. However, it appears that although the pre-service teachers are taught the new methods, implementation continues to be inconsistent due to factors like a large number of students, lack of adequate resources, and inadequate mentoring during the practicum period (Adu-Yeboah & Kwaah, 2018; Buabeng et al., 2020). Use of ICTs is increasing, although still used mainly in presentations rather than interactive teaching (Ayebi-Arthur, 2017).

In other African countries like South Africa, Nigeria, and Ethiopia, similar challenges are being faced due to issues like overcrowding in class, poor infrastructure, and ineffective mentorship programs, hence the continued use of teacher-centred methods (Atolagbe, 2021; Charalambous et al., 2014; Tadesse et al., 2018). On the other hand, Asia, like Singapore and China, is implementing the reforms consistently due to the presence of robust mentorship programs and continuous teacher training (Afandi, 2023; Yang et al., 2023), while Europe, for instance, Finland, is effectively implementing the learner-centred model due to effective mentorship programs and teacher autonomy (Adams-Budde et al., 2012; Erstad & Voogt, 2018).

From an overall perspective, therefore, the analysis indicates that while pedagogical transformations in Ghana are not only in line with the trend in Africa but are lagging behind Asian and European practice(Darling-Hammond et al., 2017)owing to limited resources and mentoring among other factors. On the local level, what it means is that any efforts aimed at making pedagogical transformation in Ghana effective will need to involve the Ministry of Education, GTEC, and NTC for proper supervision of the practicum process, continued investments in ICTs in colleges of education, and improved mentoring programs in partner schools.

The institutional capacity and resources remain crucial factors determining the success of educational policy reforms in the preparation of teachers in Ghana. According to the literature, there is substantial variation in the infrastructural facilities of the Colleges of Education in terms of the availability of library and ICT labs, internet connectivity, and learning materials. Although GETFund has helped improve some aspects of physical infrastructural development in the colleges of education, it can be observed that the benefits have not been consistent with some schools performing much better than others (Genovesi et al., 2025; Ministry of Education, Ghana, 2019). Besides, staffing problems coupled with overwork have been detrimental to curriculum implementation and practical supervision (Adu-Yeboah & Kwaah, 2018).

This situation is prevalent in African nations like Nigeria, Uganda, and Ethiopia, teacher education policies have been hampered by poor infrastructure, inadequate educational materials, and lack of staff development, especially in rural schools (Cherechi, 2018; Sula et al., 2025; Tadesse et al., 2018). The imbalance in resource availability between rural and urban areas worsens the quality differences in training, similar to the Ghanaian case. Conversely, Asian nations like Singapore and Malaysia possess better institutional capacity due to adequate training institutions, reliable internet, and professional development programs for teacher trainers, thus facilitating the implementation of policies (Afandi, 2023; Darling-Hammond et al., 2017; Hamzah et al., 2021). Likewise, in Finland, better institutions, lower staff-to-student ratios, and investments in teacher education facilitate the consistent implementation of policies (Sahlberg & Cobbold, 2021).

While Ghana has achieved some level of success through measures such as GETFund, institutional capacity weaknesses, especially relating to staffing, infrastructure, and training, still hinder the optimal implementation of these policies, especially in rural regions. This translates into the necessity to have balanced resource allocation among Colleges of Education, investments in ICTs infrastructure and internet services, as well as training for teacher educators. The main stakeholders, among which one can mention the Ministry of Education, GETFund, GTEC, and individual institution management should coordinate their efforts to overcome staffing shortages and relieve staff from too much work.

5.1 Limitations of the Study and Mitigation Strategies

First of all, several limitations were revealed during the qualitative research. Firstly, the self-report data collection method can be considered biased, while triangulation of interviews, focus groups, and document analysis was utilized for mitigation. Secondly, there can be issues related to subjective interpretation of the collected data, since it might result in biased outcomes, but coding methods, peer debriefing, and audit trail helped to eliminate the problem. Thirdly, time restrictions for research made it impossible to conduct additional observations and engage in further activities on-site; however, comprehensive interviews helped to obtain more data. Lastly, a lack of understanding about certain policies among participants demanded further explanations. Changing trends of reforms can also become one of the possible limitations for the study, but recent documents have been applied.

6. CONCLUSION

This study highlights that educational policy reforms in Ghana have positively influenced the nature of pre-service teacher education in terms of curriculum development, pedagogical approaches, the use of ICTs, and the provision of more practice sessions to promote increased awareness of teaching among pre-service teachers. However, the effectiveness of these reforms has been hindered by factors such as insufficient institutional capacity, lack of ICT infrastructure in educational institutions, staffing problems, and poor supervision of practice. In light of the above, recommendations include the need for the Ministry of Education, GTEC, and NTC to enforce reforms and provide infrastructural support in terms of ICTs, especially to colleges located in rural areas. Other recommendations include the need for continuous professional development of teachers, as well as strengthening of practice programs through enhanced school and college linkages, and provision of mentors to pre-service teachers during practice.

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