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RESEARCH ARTICLE

REFORM IN TEACHER EDUCATION CURRICULUM IN GHANA: UNVEILING THE PERCEPTION OF TUTORS OF COLLEGES OF EDUCATION

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Abstract

This study examined the perceptions of tutors in Ghana's colleges of education concerning the reformed teacher education curriculum, with a focus on its ability to address the needs of pre-service teachers and meet professional and educational expectations. A quantitative descriptive survey design was employed to collect data from 422 tutors using a validated questionnaire with a Cronbach's alpha of 0.79, indicating high reliability. The data were analysed using a one-sample variance test to evaluate the alignment of tutors' perceptions with established curriculum expectations. The findings revealed statistically significant results that tutors perceive the curriculum as aligning with contemporary educational needs ($p = 0.028$), addressing diverse learner requirements ($p = 0.003$), and preparing pre-service teachers for future professional careers ($p = 0.012$). Additionally, tutors expressed dissatisfaction with inadequate teaching and learning resources, particularly ICT tools ($p = 0.324$), which they considered essential for effective implementation. The study concluded that enhancements to the curriculum should include integrating modules that emphasize holistic development, such as critical thinking, creativity, and emotional intelligence, adopting innovative teaching strategies, ensuring consistent resource provision, and providing professional development for tutors. The study recommended regular updates to the curriculum to ensure alignment with evolving global educational trends, technological advancements, and to maintain its relevance and adaptability. This study contributes to curriculum reform literature by offering insights for policymakers, curriculum developers, and educational institutions to refine teacher education programs, aligning them with global standards and the demands of 21st-century education.

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Introduction:-

Over recent decades, the global discourse on educational and teacher education curriculum reforms has gained prominence within academic circles (Chung, 2023; Deng, 2018; Gouédard et al., 2020; OECD, 2020; Longhurst&Jones, 2018; Wilburn et al., 2022; Vela et al., 2024). This discussion is driven by rapid technological

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advancements and structural economic changes, highlighting the need for an educational framework that prepares students effectively for future challenges (Annala, Linden & Makinen, 2016; Blackmore & Kandiko, 2012; Chan et al., 2017; Cliff et al., 2020; Law, 2022; Pryor et al., 2012). The quality of national education systems often depends significantly on the quality of teachers, which in turn is influenced by the teacher education programmes implemented. Consequently, both developed and developing nations place considerable emphasis on the curricula adopted in teacher training programmes (Bakah, Voogt & Pieters, 2012; Flores, 2016). In general, a curriculum encompasses all experiences that learners acquire through various channels such as classrooms, workshops, and playgrounds, facilitated by interactions with educators. Specifically, the teacher education curriculum includes the comprehensive body of knowledge, skills, and values that pre-service teachers must engage with to develop the necessary competencies and proficiency for effective teaching. Focusing on teacher education curriculum is critical as it largely determines the developmental trajectory of societies. In developing countries, the achievement of sustainable development goals related to education relies heavily on the presence of well-qualified, trained, adequately remunerated, and motivated teachers (SDGs, 2015; UNESCO, 2016). Establishing such a workforce starts with robust teacher education curricula, essential for cultivating competent educators (Agbaje, 2023; Pryor et al., 2012; Mahabeer, 2018). Although curricular issues have long been central to educational policy discussions, the accelerated pace of globalization and technological progress has brought teacher education curriculum reforms into sharp focus. These reforms are crucial for equipping 21st-century teachers with up-to-date knowledge, innovative pedagogical skills, and broad competencies (Gouédard et al., 2020; Maphosa & Mashau, 2014; Blackmore & Kandiko, 2012; Annala, Linden & Makinen, 2016).

Particularly in Africa, teacher education curricula have undergone intense scrutiny to assess their relevance and appropriateness within the educational sectors (Afful-Broni et al., 2020; Agbaje, 2023; Pryor et al., 2012). Notably, analysts, such as Afful-Broni et al. (2020), advocate for a shift from merely expanding access to higher education towards ensuring that the educational offerings are relevant and responsive to the needs of the nations and their citizens. Similarly, Pryor et al. (2012) have also noted that African countries often focus excessively on infrastructure at the expense of quality teacher preparation. In addition, Agbaje (2023) has raised critical questions regarding the content of curricula within African teacher education institutions, highlighting the need for substantial transformation. In response to these reform calls, Ghana has initiated a comprehensive curriculum transformation across all educational levels, as directed by the National Council for Curriculum and Assessment (NaCCA, 2022). This transformation aims to align the education system with both Ghana's developmental needs and international educational standards. Significant curriculum overhauls are particularly evident in the Colleges of Education (CoEs) in Ghana.

Tutors in these colleges are key stakeholders in the training of pre-service teachers and play a central role in the implementation of the teacher education curricula. The success of these reforms heavily depends on their perspectives and active engagement with the curriculum (OECD, 2020). However, a major challenge during these reforms is the actual implementation of new curricula (Fullan, 2015; OECD, 2020). This issue is exacerbated by the critical role that tutors play in the classroom, underscoring the necessity to understand and integrate their views on the new teacher education reforms in Ghana. The effectiveness and overall success of the reformed curricula largely hinge on how these educators perceive and enact the changes.

Despite the substantial theoretical discourse surrounding the need for curriculum reform in teacher education, there is a notable deficiency in empirical data regarding the actual implementation processes and their outcomes, particularly within the context of developing countries such as Ghana (El-Astal, 2023; Fullan, 2015; OECD, 2020). This gap is evident in the scarcity of detailed insights into how new curricula are perceived by tutors and the subsequent impacts on their teaching practices. While existing studies predominantly focus on curriculum design and the theoretical bases of educational reforms, they often overlook the critical perspectives and experiences of the tutors tasked with implementing these curricula (Bakah, Voogt, & Pieters, 2012; Flores, 2016).

Understanding tutors' perceptions and the challenges they encounter is essential for the effective implementation of curriculum reforms and for making necessary adjustments to reform strategies (Gouédard et al., 2020). Furthermore, there is a pressing need for research that evaluates how well current curricula align with both local developmental needs and global educational standards. Such alignment is crucial to ensure that teacher education not only adheres to international best practices but also effectively addresses the specific societal and economic conditions of the country (Agbaje, 2023; UNESCO, 2016). Moreover, the literature frequently lacks comprehensive evaluations of the effectiveness of new teacher training programmes in enhancing teacher competencies and student outcomes. There

is a significant need for detailed studies that assess the perceptions of the implementers of the reformed teacher education curricula, which could provide valuable insights for continuous improvement and policy formulation (Chang et al., 2017; Cliff et al., 2020). These studies are vital for developing a robust understanding of the educational transformations necessary to equip future teachers with the skills and knowledge required to meet the demands of a rapidly changing global landscape. Against this backdrop, this study addresses the following key questions:

- i. What is the perception of tutors of Colleges of Education on the reformed teacher education curricula in Ghana?
- ii. How do tutors of COE perceived the reformed teacher education curricula in terms of addressing the needs of pre-service teachers?

It is significant to state this caveat, that this study is not intended to evaluate the curriculum and its implementation process, instead it is meant to gauge the views of ‘street level bureaucrats’, (the tutors) who are instrumental and are at the forefront in the implementation of the ‘reformed’ teacher education curricula.

Literature Review:-

The Concept of Curriculum

The concept curriculum is not only a slippery concept but also a complex one that can be defined in several ways. Although, defining curriculum is in a state of a disarray (Agbaje, 2023; Le Grange, 2018; Deng, 2018), analysts nonetheless, have ceaselessly conceptualized curriculum from narrow to broad perspective over the years. Etymologically, the word curriculum evolved from the Latin word ‘currere’ which translates in to ‘to run a course’ (Pinar, 2011, p. xii). Beyond this original meaning, many scholars have proffered several definitions. According to Phenix (1962) a curriculum is content or subject area learned in school. For Oliva (1988) a curriculum refers to series of experiences that students encounter at school, the discipline, subject and material taught in schools. In the view of Mulenga (2018, p. 2), the curriculum embodies the intentions of education, it is the programme of education which carries the beliefs, values, attitudes, skills knowledge and all that education is all about. In more encompassing manner, the curriculum is referred to have four meanings: 1. Curriculum as syllabus; 2. Curriculum as product; 3. Curriculum as process and 4. Curriculum as praxis. Curriculum as a syllabus connotes the content or body of knowledge that is to be transmitted or subjects to be taught, or both.

In terms of curriculum as product, it includes specifying learning objectives-goals, introducing useful learning experiences-content, organizing experiences to maximise their effects – teaching methods and evaluating the process and revising the areas that were not effective-assessment. For the curriculum as interactive process, it involves written curriculum as a negotiated artefact, its implementation in teaching -learning processes and students’ autobiographical experiences and learning engagement; and last curriculum as praxis concerns constant evaluation of what is valuable and what needs to be changed and why. The latter definition fits the study well because higher education curriculum transformation and change in Ghana is geared towards raising a 21st century individual who is not only highly skilled, competent, innovative and problem solver, but also effectively function as a ‘global’ citizen (NaCCA, 2022).

Teacher Education Curriculum

The teacher education curriculum is fundamentally crucial in defining the quality of education across nations. It serves as the structural core of training programs that equip pre-service teachers with the necessary skills, proficiencies, and competencies essential for successful engagement in the teaching profession. Maphosa and Mashau (2014) describe the teacher education curriculum as an inclusive framework that encompasses the required body of knowledge, skills, and values essential for trainee teachers to achieve proficiency and competency in effective teaching practices.

The objectives of teacher education are diverse and comprehensive. Primarily, it seeks to provide a deep and robust understanding of the subject matter, ensuring that teachers possess a firm command over the content they will teach. This objective encompasses both the theoretical underpinnings and practical applications of content, enabling teachers to deliver educational material that is both intellectually stimulating and engaging for students. Additionally, the curriculum is crafted to develop pedagogical skills, which cover a range of teaching methodologies and strategies designed to create an optimal learning environment. These strategies are pivotal in aiding teachers to effectively manage classroom dynamics, engage a diverse student body, and foster environments conducive to active learning.

Furthermore, the curriculum places a strong emphasis on the cultivation of soft skills in teachers, such as communication, empathy, and ethical judgment. These skills are critical for forming meaningful relationships with students, comprehensively understanding their needs, and fostering a supportive and inclusive educational setting. The curriculum also aims to instill a professional demeanour and ethical values in teachers, positioning them as role models and advocates for the well-being of their students. Teacher education additionally addresses the necessity for ongoing professional development. As the educational landscape continuously evolves due to technological advancements and shifts in societal needs, the curriculum must equip teachers with the capacity for adaptation and ongoing enhancement of their instructional practices. This component of teacher education is vital for maintaining long-term educational quality and aligning with both global educational standards and innovations. Ultimately, the teacher education curriculum transcends mere knowledge transfer; it is instrumental in shaping educators who will influence future generations. It ensures that teachers are not only thoroughly prepared with respect to subject matter and pedagogical skills but are also adaptable, reflective practitioners who can navigate the ever-changing demands of a dynamic educational landscape. Therefore, a dynamic and responsive teacher education curriculum is indispensable for cultivating competent, effective, and professional teachers who significantly contribute to the educational and societal framework of their communities.

Educational reforms in Ghana have unfolded over several decades, focusing on enhancing the quality of education to meet the dynamic demands of a globalizing world. These reforms are particularly pivotal in the domain of teacher education, aiming to elevate the standards of teaching and learning across the nation. The central goal of these reforms is to cultivate well-qualified, competent, and effective educators capable of delivering education that aligns with 21st-century standards. The evolution of teacher education in Ghana traces its roots back to the post-independence era, targeting the urgent educational needs of a nascent nation. Initially, the primary focus was to augment the number of educators to address the needs of an expanding educational sector. Over time, this focus has transitioned towards enhancing the quality of educators and harmonizing teacher education with international standards. In a significant shift initiated in 2018, teacher education in Ghana moved from a diploma-based to a degree-based system. This change was implemented across all 46 public Colleges of Education in collaboration with five public universities. The redesigned curriculum is structured to offer a more rounded educational foundation, concentrating on subject-specific knowledge, pedagogical skills, and an intensive practical component. Spearheaded by the National Teaching Council (NTC), the licensing of teachers began with the aim to professionalize the field. Since 2020, it has been mandatory for graduating teachers to pass a licensure exam before they are permitted to teach in Ghanaian schools. This measure ensures that teachers are not only proficient in their subject matter but also skilled in pedagogy and classroom management. The reformed curriculum places a strong emphasis on practical teaching experiences. Trainee teachers engage in extensive, supervised teaching practices, ensuring that theoretical knowledge is effectively applied within classroom settings. Recognizing the critical role of information and communication technology in contemporary education, the new curriculum includes comprehensive ICT training. This is designed to equip teachers with the skills necessary to utilize technological tools in education, thus preparing students for a digitally interconnected world. The reforms also underscore the importance of continuous professional development for teachers to keep pace with new educational trends, technologies, and pedagogical methods. Participation in CPD programs is essential for maintaining teaching licenses in Ghana. Despite the progressive transformation of the educational landscape in Ghana, challenges such as resource limitations, resistance to change, and ensuring consistent quality across all institutions persist. However, there is a clear improvement in the quality of teacher graduates, anticipated to enhance student outcomes substantially in the long term. Moving forward, the focus is expected to remain on refining teacher training quality, broadening the use of technology in education, and aligning Ghana's teacher education more closely with global best practices. These educational reforms are crucial for realizing Ghana's aspiration to improve educational outcomes and cultivate a knowledgeable, skilled workforce that can contribute effectively to national development and compete on a global scale.

Theoretical Framework

Two theories are employed in this study: the complexity and the Street level bureaucratic theory. While the complexity underscores the need for the curriculum to be reformed from time to time to keep it relevant; the street level bureaucracy theory explicates the centrality of tutors in the implementation of the teacher education curriculum. Accordingly, their views and perceptions of the curriculum is worth investigating as they the ones implementing the curriculum.

Complexity Theory

The complexity theory is traced to the general systems theory propounded by Ludwig Bertalanffy in the 1940s and 50s. The theory evolved from the sciences but has been widely used in several disciplines including education (Snyder & Burns, 2013). The crux of theory is that change, adaption and evolution of organisms is intended to ensure their survival in their systems. It thus explains the interaction between systems and their parts. In this light, to make critical decisions, systems and their parts must be considered. The theory posited that systems are multifaceted, dynamic and intend to lead to new realities. It further assumes that systems and their elements change from time to time which requires the evolution of new realities in order to ensure the survival of the total system. Thus, this theory is utilized in this study to depict that the curriculum which is an element of the educational system must change from time to time to accommodate the evolving needs of the contemporary education.

Street Level Bureaucracy Theory

Street level bureaucracy theory is also employed to anchor this study. The street level bureaucracy theory was developed by Michael Lipsky in 1969. This theory is widely employed in policy and curriculum implementation (Fullan, 2015; Chang & Brewer, 2022). The crux of theory is that successful implementation of policies significantly depends on the implementers (who are referred to as street-level bureaucrats) who implement the policy. The tutors of CoE are vital in implementation of the reformed teacher education curricula. In this study, the effective implementation of the reformed curriculum depends on the tutors. Accordingly, the views of the tutors in relation to the reformed teacher curricula are worth documenting since they are pointedly responsible for the implementation of reformed teacher education curricula.

Curriculum Reforms and Implementation Across the Globe

Recent changes in curricula across the globe are geared towards achieving and nurturing “global citizens and effective members of modern-day society” (Barrie, 2004, p. 262), who are equipped with ‘21st century skills’ (OECD, 2016) or ‘generic competences’ (Chan et al., 2017) such as communication skills, teamwork, problem-solving, creativity, positive values and attitudes. Defined as efforts to review, or update the content of knowledge, including its selection and organization and associated issues concerning student learning, curriculum reforms, besides fulfilling a national development agenda, is also geared towards aligning with international benchmarks (Gilbert, 2010). Accordingly, several countries have undertaken curriculum reforms in recent times. France (Guedet et al., 2018), England (Roberts, 2018), Finland, (Halinen, 2018), Nigeria (Igbokwe, 2015), Kenya, (M’mboga Akala, 2021) just to mention but a few. In the same vein, curricula reforms being undertaken across all the educational levels in Ghana, particularly, the teacher educational curricula align with the general global trends.

Justification for Teacher Education Curricula Reforms in Ghana

Across the globe in recent decades, one of the key reasons for undertaking curriculum reforms is to ensure that educational systems are responding to the fast-changing world. As the OECD (2020, p.4) argues “(m)any countries ... have engaged in curriculum reforms as a way to equip children with the knowledge, skills and competences needed for tomorrow”. Particularly in Ghana, reforms of teacher education curricula were occasioned by some fundamental issues including ills in the Ghanaian educational system and inherent problems in teacher education curricula itself (The National Teacher Education Curriculum Framework-NTECF, 2017). Tellingly, among the challenges of the education system that prompted the reforms of the teacher education curricula included; poor development of numeracy and literacy skills among pupil at the basic level; poor performance in critical subjects especially English, mathematics and integrated science at both basic and secondary levels; the increasing burden of the educational system on Ghanaian children due to curricula that were dissociated from the personal and social context of children and the inability of teachers to connect with children and respond to their individual needs (NTECF, 2017, p. 12).

In addition, other challenges that also mooted for the reform of the teacher education curricula were; the inadequacy of the teacher education curricula to address the lack of improvement in learning outcomes at the basic schools levels, for the old teacher education curricula was skewed towards subject-content knowledge to the detriment of curriculum space for developing understanding of pedagogy and practical classroom teaching skills; the disconnect between the initial teacher education curricula and school systems curricula; the lack of cross-cutting issues (issues of equity, gender and inclusivity) and the 21st century skills and competencies (problem solving skills, critical thinking, creativity, collaboration, communication, innovation, entrepreneurship and digital literacy that are necessary for productivity in the 21st century) in the curriculum (NTECF, 2017, pp. 12-13). Lastly, the development of National Teachers Standards (NTS, 2016) and the Pre-Tertiary Teacher Development and

Management Policy also served as impetus for the revision of the teacher education curriculum. These new policy frameworks require teachers to possess certain skills and competence, hence the push to review the teacher education curriculum.

Curriculum Research in Ghana

In general, the literature on curriculum is burgeoning in Ghana (Aboagye&Yawson, 2020; Addai-Mununkum &Setordzi, 2023; Abudu, 2015; Ameyaw et al., 2019; Asante et al., 2024; Bakah et al., 2012; Cobbold, 2017; Gervedink Nijhuis et al., 2013; Kankam, 2014; Mahama, 2022). Addai-Mununkum and Setordzi captured the experiences of teachers in the implementation of changes via the utilization of 21-century pedagogies. Gervedink Nijhuis et al. (2013) in a single-case study of a professional development programme for polytechnic teachers explored how cultural factors are relevant in the development and implementation of curriculum. For Ameyaw et al. (2019), utilizing a case in Ghana focused on responsive curriculum for postgraduate. They found that developing a responsive curriculum requires key process attributes including iteration, built-in learning within the curriculum development process, and the contribution of actors from academia. Similarly, whiles, Bakah et al.'s (2012) study, investigated that curriculum design and training needs of teachers of higher education in Ghana, Mahama's (2022) study examined the creative curriculum in Ghana.

Admittedly, this study is not the first to attempt to underscore the perceptions of teachers in relation to curriculum issues in Ghana. Aboagye and Yawson (2020) examining the perception of teachers on the new education curriculum at the basic level noted that teachers perceived the curriculum to be relevant, as it promotes group work, prepares students for lifelong learning skills, prepares students for job market, promotes inclusivity and gender parity and projects Ghanaian culture and society. Relatedly, Armah's (2020) study focused on perception of teacher on their readiness to implement the standard based curriculum in Ketu South District. Abudu (2015), in a similar study explored the perceptions of basic schoolteachers on curriculum design and barriers inhibiting their participation. While these studies are revealing, conspicuously missing in the literature are the views of tutors of COE on curriculum reforms regarding teacher education in Ghana. Notably, perceptible studies on curricula in Ghana are focused on curricula of basic level education Thus, this study plugs the gap in the literature.

Methodology:-

This study employed a quantitative research design to investigate the perceptions of tutors of CoE of the reformed curriculum and how it addresses the needs of teacher trainees in Ghana. A cross-sectional survey was utilized to gather data from a representative sample of tutors of CoE. This approach allows for collecting data at a single point, providing a snapshot of teachers' perceptions of curriculum reform in teacher education in Ghana.

The study population consisted of teaching staff (Head of Departments and tutors) of selected Colleges of Education in Ghana. The Cochran formula was used to determine sample size for the study. According to Ahmed (2024), the Cochran formula is used to estimate the sample when the population is large or infinite population.

$$n=Z^2 \cdot p \cdot (1-p) / e^2$$

Where:

n = sample size

Z = Z-value (1.96 for 95% confidence level)

p = estimated proportion of an attribute present in the population (0.5 for maximum variability)

e = margin of error (0.05)

$$n=1.96^2 \cdot 0.5 \cdot (1-0.5) / 0.05^2$$

$$n=3.8416 \cdot 0.5 \cdot (0.5) / 0.0025$$

$$n=1.9208 \cdot 0.5 / 0.0025$$

$$n=0.9604 / 0.0025$$

$$n=384.16$$

Using this formula, the estimated sample size was approximately 384 teachers. To account for non-responses and incomplete surveys, the sample size was increased by 10%, resulting in a final sample size of approximately 422 teachers.

Multi-stage sampling was used to select sample for the study. A multi-stage sampling method allows for the selection of units at different hierarchical levels, such as first selecting college(s) within each university, then tutors from those selected colleges according to gender thus making the process more structured and manageable. The

selection of the colleges and the number of teaching staff (male and female) for the study was done using proportional stratified sampling. There are 46 colleges spread across different regions in Ghana and are affiliated to five distinct universities. The universities are, namely: University of Ghana (UG), six colleges; University of Education, Winneba (UEW), 15 colleges; University of Cape Coast (UCC), 14 colleges; University for Development Studies (UDS), six colleges; and Kwame Nkrumah University of Science and Technology (KNUST), five colleges. In the first stage, fourteen colleges were selected from the 46 colleges using proportional stratified sampling (in Table 1). The next stage was to select 28 tutors (HOD) from the selected colleges. In some colleges, all the female tutors were selected because of their numbers relative to the population of the male. In the last stage the tutors were randomly selected based on their acceptance to participate in the study. Two heads of departments (HOD) were selected from each of the colleges selected, using the simple random sampling technique. Sample, therefore, consisted of 394 teaching staff (non-HOD). However, each college has six departments, as such all the heads of departments of some colleges were selected.

Table 1: Breakdown of Sample Size.

University	Number of Colleges	Number of colleges selected	Number of teaching staff (non-HOD)			Number of teaching staff (HOD)
			Female	Male	Total	
UG	6	2	13	43	56	4
UEW	15	5	28	112	140	10
UCC	14	4	28	86	114	8
UDS	6	2	14	42	56	4
KNUST	5	1	6	22	28	2
Total	46	14	89	305	394	28

A questionnaire, was used to collect data. With the permission of the principals of the selected colleges, the researchers personally visited the colleges and collected the data. Respondents' consent was sought, and respondents were provided with clear instructions for completing the questionnaire. Additionally, in the preamble of the instruments, we explained the essence of the research and indicated that it was voluntary. To protect their identity, the tutors participated in the exercise anonymously. The One-Sample Variance Test was employed to analyse the data collected for this study. This statistical method was deemed appropriate as it evaluates whether the variance of a single sample deviates from a specified value or aligns with the expected population variance. The study aimed to assess the diversity in tutors' perceptions and their congruence with established norms. As noted by Snedecor and Cochran (1989), this test is particularly useful for comparing sample variability against a theoretical or population benchmark.

The One-Sample Variance Test operates under the assumptions of a normal data distribution and independence of observations. The Cronbach's alpha of 0.921, indicating high reliability and internal consistency, further supports the validity of the normality assumption. Consequently, this test was suitable for the data, as the conditions of normal distribution and observation independence were satisfied (Montgomery, 2020). Additionally, Anderson et al. (2016) emphasise that the One-Sample Variance Test is most effective in scenarios where the focus is on response dispersion or consistency rather than mean values.

Findings

With regard to sex of respondents, the results as presented in Figure 1 indicate that male tutor consisted of 77.9% while female tutors were 22.1%. In terms of ages of respondents, the results reflected in Figure 2 show that the majority, which is 45.9% of the tutors are in the age range (41-50). The second highest age range 51-60 with 26.3%. The ages range 20-30 and 31-40 obtained 13.9% each. For number of years in service, the results portray (see Figure 3) 18.9% of the tutor has worked between 0 and 5 years. 6.7% of the tutors has been in service spanning 6 and 10 years. While 32.0% and 31.0% correspond to age range 11-15 and 16-20 years respectively. 11.4% of the tutors has work experience of 21 and above years. As regards highest qualifications of tutor, as displayed in figure 4, 3.5% of tutors possess Bachelor's degrees. While 59.8% of tutors are Master's degree holders, 34.7% have PhDs as their highest qualifications obtained. Lastly, a paltry 2.0% of the tutors indicates they possess other certificates other than Bachelor, Master or PhD degrees.

Table 2: Demographic Characteristics of Tutors.

Demographics		Frequency	Percentage
Sex	Males	314	77.9
	Females	89	22.1
Age	20-30	56	13.9
	31-40	56	13.9
	41-50	185	45.9
	51-60	106	26.3
Work Experience	0-5	76	18.9
	6-10	27	6.7
	11-15	129	32.0
	16-20	125	31.0
	21 and above	46	11.4
Higher Qualification	Bachelor's degree	14	3.5
	Master's degree	241	59.8
	PhD	140	34.7
	Others	8	2.0
	Total	403	

To address the objectives of this study, the researchers conducted reliability and multicollinearity tests to ensure that the data is appropriate for analysing the teachers' perceptions of Reforms in Teacher Education Curriculum in Ghana. Tables 3 and 4 present the details.

Table 3: Reliability Test.

Analysis of variance:

Source	DF	Sum of squares	Mean squares	F	Pr> F
Between subjects	111	746.047	6.721	12.657	<0.0001
Within subjects	784	464.012	0.592		
Between measures	7	51.422	7.346	13.834	<0.0001
Residual	777	412.590	0.531		
Total	895	1210.058	1.352		

Computed against model $Y = \text{Mean}(Y)$

Cronbach's alpha statistics

Cronbach's alpha	Standardized Cronbach's Alpha
0.921	0.922

Table 4: Multicollinearity Test.

Statistic	CITKPA	SCWEF	CCCRT	CBCSEC	STLRASC	IPATT	SREC	CMET
R ²	0.541	0.381	0.366	0.529	0.432	0.503	0.262	0.341
Tolerance	0.459	0.619	0.634	0.471	0.568	0.497	0.738	0.659

VIF 2.180 1.614 1.577 2.123 1.761 2.011 1.355 1.516

Table 3 shows a high Cronbach's alpha score of 0.921, indicating strong internal consistency of the survey instrument used to assess tutors' perceptions. This reliability ensures that the items measured across different variables accurately reflect tutors' perceptions regarding the reformed teacher education curriculum.

From Table 4, the tolerance values for all variables are above 0.2, and the Variance Inflation Factor (VIF) values are below 5, confirming no issues with multicollinearity. This ensures that each variable independently contributes to understanding tutors' perceptions without redundant overlap.

Objective 1: To examine the perception of tutors of Colleges of Education on the 'reformed' teacher education curricula in Ghana.

This section addresses the perceptions teachers in the College of Education gave about the reformed teacher education curriculum. A one-sample Variance test was performed, and the results are presented in Table 5 below.

Table 5: Perception of Tutors on Curriculum of College of Education.

Perception of Teachers	Variance	Chi-square (Observed value)	Chi-square (Critical value)	DF	p-value (Two- tailed)	alpha
CITKPA	1.252	140.248	143.180	112	0.073	0.05
SCWEF	1.162	128.991	142.049	111	0.233	0.05
CCCRT	1.162	128.991	142.049	111	0.233	0.05
CBCSEC	1.417	155.910	140.917	110	0.005	0.05
STLRASC	1.133	123.491	139.784	109	0.324	0.05
IPATT	1.416	148.642	135.247	105	0.007	0.05
SREC	1.473	159.083	138.651	108	0.002	0.05
CMET	1.638	183.434	143.180	112	<0.0001	0.05

Definition of Variables

CITKPA=	The curriculum effectively integrates theoretical knowledge with practical application
SCWEF=	The structure of the curriculum is well-organized and easy to follow
CCCRT=	The content is comprehensive and covers relevant topic
CBCSEC=	[The curriculum blends core subjects with elective courses effectively
STLRASC=	There are sufficient teaching and learning resources available to support the curriculum
IPATT=	The institution provides adequate technology and tools to enhance learning
SREC=	I am satisfied with the reformed education curriculum
CMET=	The curriculum meets my expectations as a tutor

Table 5 demonstrates significant findings for variables such as the curriculum blends core subjects with elective courses effectively (CBCSEC) ($p = 0.005$), the institution provides adequate technology and tools to enhance learning (IPATT) ($p = 0.007$), respondents satisfied with the reformed education curriculum (SREC) ($p = 0.002$), and the curriculum meets my expectation as a tutor (CMET) ($p < 0.0001$). These results indicate that tutors perceive the integration of core and elective subjects, provision of adequate technological tools, satisfaction with the curriculum, and its ability to meet their expectations as critical aspects of the reformed curricula. However, variables such as the structure of the curriculum is well-organized and easy to follow (SCWEF) ($p = 0.233$), The content is comprehensive and covers relevant topics (CCCRT) ($p = 0.233$), and there are sufficient teaching and learning resources available to support the curriculum (STLRASC) ($p = 0.324$) showed no statistical significance, suggesting mixed or neutral perceptions about curriculum structure, comprehensiveness, and teaching resources. These results suggest that while the reformed curricula meet several expectations, challenges persist, particularly in ensuring sufficient teaching resources and the comprehensive organization of the curriculum.

Objectives 2: To establish how tutors of COE perceived the reformed teacher education curricula in terms of addressing the needs of pre-service teachers

Table 6: Perception of Tutors on Curriculum addressing Pre-Service Teachers Needs.

Perception of Tutors on Curriculum addressing Pre-Service Teachers Needs	Variance	Chi-square (Observed value)	Chi-square (Critical value)	DF	p-value (Two-tailed)	alpha
CRCNS	1.132	123.355	139.784	109	0.028	0.05
CADNPST	1.143	124.555	139.784	109	0.003	0.05
CPPTFPC	1.026	111.864	139.784	109	0.012	0.05
CPPLES	0.951	104.559	140.917	110	0.743	0.05
CCPAPGS	1.026	111.864	139.784	109	0.812	0.05

Definition of Variables

CRCNS=	The curriculum reflects the contemporary needs of students
CADNPST=	The curriculum addresses the diverse needs of pre-service teachers
CPPTFPC=	The curriculum prepares pre-service teachers for their future professional careers
CPPLES=	The curriculum promotes a positive learning experience for students
CCPAPGS=	I believe the curriculum contributes positively to the academic and personal growth of students

The findings highlighted in Table 6 indicated a mix of positive and neutral perceptions among tutors regarding the reformed teacher education curriculum's ability to address the needs of pre-service teachers. Statistically significant results were observed for the curriculum's alignment with contemporary needs ($p = 0.028$), its inclusivity in addressing diverse pre-service teacher requirements ($p = 0.003$), and its effectiveness in preparing pre-service teachers for future professional careers ($p = 0.012$). These results suggest that tutors perceive the curriculum as relevant to current educational trends, responsive to diverse learner needs, and practical in equipping future teachers with essential skills. These strengths align with global best practices emphasized in literature, such as Flores (2016), who underscores the importance of relevance in teacher education curricula, and Fullan (2015), who highlights the value of integrating theoretical and practical components to enhance professional readiness. However, the findings also reveal areas of neutrality or mixed perceptions, as seen in the non-significant results for variables related to promoting positive learning experiences ($p = 0.743$) and contributing to students' academic and personal growth ($p = 0.812$). These outcomes indicate that tutors are uncertain about the curriculum's ability to create an engaging, supportive learning environment or holistically address broader developmental needs. This suggests that while the curriculum is effective in addressing professional goals, it may lack elements that foster critical thinking, creativity, and emotional intelligence—key aspects of holistic education. Agbaje (2023) similarly notes that a curriculum's impact is maximized when it balances professional preparation with strategies that motivate and engage learners.

Discussions of Findings:-

Perception of Tutors on the Curriculum of Colleges of Education

The analysis reveals both the strengths and areas for improvement in the reformed curriculum of Ghana's Colleges of Education. Tutors expressed positive perceptions of key aspects, including the integration of core and elective subjects (CBCSEC, $p = 0.005$), the provision of technological tools (IPATT, $p = 0.007$), their satisfaction with the curriculum (SREC, $p = 0.002$), and the curriculum's ability to meet their expectations (CMET, $p < 0.0001$). These findings highlight the curriculum's effectiveness in balancing foundational knowledge with specialization, incorporating ICT for teaching and learning, and addressing tutors' professional goals. Such strengths reflect the curriculum's responsiveness to global educational standards and its relevance to the practical needs of educators. Supporting literature emphasises that curricular flexibility, integration of technology, and alignment with professional development goals are essential for enhancing teaching and learning outcomes (Gouédard et al., 2020; Law, 2022). Moreover, a curriculum that meets the expectations of educators fosters their engagement and strengthens their commitment to successful implementation (Snyder & Burns, 2013).

However, the findings also reveal areas requiring attention, as mixed or neutral perceptions were recorded for variables such as curriculum structure and organization (SCWEF, $p = 0.233$), comprehensiveness of content (CCCRT, $p = 0.233$), and availability of teaching and learning resources (STLRASC, $p = 0.324$). These results suggest potential challenges in the curriculum's coherence, its ability to comprehensively cover relevant topics, and the sufficiency of teaching resources. Such gaps hinder the seamless delivery and overall effectiveness of the curriculum. Existing literature underscores that a well-organized curriculum and adequate resources are fundamental

for enabling educators to deliver content effectively and achieve desired outcomes (Fullan, 2015; Agbaje, 2023). Without addressing these issues, the curriculum risks falling short in preparing pre-service teachers comprehensively. Efforts to enhance these aspects are essential to align the curriculum with both local developmental priorities and global educational standards, thereby ensuring its relevance and effectiveness in meeting the demands of 21st-century education.

Tutors' Perceptions of the Curriculum Addressing Pre-Service Teachers' Needs

The findings underscore both strengths and gaps in the reformed teacher education curriculum as perceived by tutors. Statistically significant results for variables such as alignment with contemporary needs ($p = 0.028$), inclusivity in addressing diverse pre-service teacher requirements ($p = 0.003$), and preparation for professional careers ($p = 0.012$) suggest that tutors view the curriculum as effective in these areas. These results are consistent with previous studies, including Flores (2016), who highlights that a relevant and inclusive curriculum is critical in addressing the diverse needs of learners and preparing them for the complexities of teaching. Similarly, Fullan (2015) emphasizes that a well-structured curriculum that integrates theoretical and practical components fosters professional readiness, aligning with the positive perceptions observed in this study.

The curriculum's alignment with contemporary educational trends indicates that it incorporates global developments and pedagogical advancements, which are crucial for 21st-century teacher preparation. Annala, Linden, and Mäkinen (2016) argue that responsiveness to current trends ensures that teacher education programs remain effective in equipping pre-service teachers with the necessary skills to navigate dynamic classroom environments. Additionally, the positive perception of the curriculum's inclusivity supports the notion that addressing diverse learner needs is essential for fostering equitable and effective education systems, as noted by Agbaje (2023). However, the study also reveals areas of neutrality, with non-significant results for variables such as promoting positive learning experiences ($p = 0.743$) and contributing to academic and personal growth ($p = 0.812$). These mixed perceptions suggest potential deficiencies in the curriculum's ability to create engaging learning environments and support holistic student development. Agbaje (2023) highlights that curricula in developing contexts often prioritize professional competencies at the expense of fostering critical thinking, creativity, and emotional intelligence—key attributes of holistic education. The lack of strong agreement in these areas may indicate a need for greater emphasis on strategies that promote engagement and broader developmental outcomes, as also suggested by Blackmore and Kandiko (2012), who advocate for curricula that balance academic rigor with personal growth initiatives.

Conclusion:-

The findings of this study reveal both strengths and areas requiring improvement in the reformed teacher education curriculum as perceived by tutors. The curriculum is positively evaluated for its alignment with contemporary educational needs, inclusivity in addressing the diverse requirements of learners, and its effectiveness in preparing pre-service teachers for professional careers. These strengths affirm its relevance and responsiveness to global educational trends and professional expectations. However, mixed perceptions regarding the curriculum's capacity to foster positive learning experiences and support holistic development highlight the need for refinement. Enhancing the curriculum by integrating elements that promote holistic growth, adopting innovative teaching strategies, and establishing robust feedback mechanisms can significantly improve its overall effectiveness. By leveraging its strengths and addressing identified gaps, the curriculum can better equip pre-service teachers to navigate the complex and evolving demands of 21st-century education.

Recommendations:-

Based on the findings of this study, the following recommendations are proposed to enhance the effectiveness of the reformed teacher education curriculum:

1. The curriculum should incorporate modules that promote holistic development by fostering critical thinking, creativity, emotional intelligence, and interpersonal skills, which are essential for equipping pre-service teachers to address diverse classroom challenges.
2. Regular updates to the curriculum are necessary to ensure alignment with evolving global educational trends, technological advancements, and the specific needs of local communities. Strengthening stakeholder engagement by actively involving tutors, pre-service teachers, and other stakeholders in curriculum design and review processes can address diverse perspectives and foster a sense of ownership.

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