



## Bridging Theory and Practice: An Evaluation of Competency-Based Education Models in Ghana's Nursing and Midwifery Training Colleges

Dorothy Benewaa,<sup>1\*</sup> Rita Brago Agyei,<sup>2</sup> Stephen Aboagye,<sup>3</sup> Kweku Owusu Danso,<sup>4</sup> Afia Kwakyewaa Owusu-Agyeman<sup>5</sup>

<sup>1</sup>Vice Principal, College of Nursing and Midwifery, Tanoso, Ghana

<sup>2</sup>Principal Health Tutor, Nursing and Midwifery Training College, Atibie, Ghana

<sup>3</sup>Nursing and Midwifery Training College, Asanta, Ghana

<sup>4</sup>Principal Health Tutor, Nursing Training College, Kwapong

<sup>5</sup>Senior Health Tutor, Nurses' and Midwives' Training College, Tamale

\*Corresponding author

### Abstract

This paper aims to evaluate the implementation of Competency-Based Education (CBE) models in Ghana's nursing and midwifery training colleges, focusing on bridging the gap between theory and practice. A comprehensive literature review and analysis of recent studies were conducted, examining cultural and contextual factors, healthcare system context, challenges in nursing education, and capacity building efforts. The findings reveal significant challenges in clinical placements, quality assurance, and alignment of competencies with cultural and healthcare system needs. While CBE implementation shows promise, it is hindered by resource constraints, limited faculty capacity, and inadequate integration of cultural factors. The paper concludes that current approaches are not fully adequate to address the complex interplay of factors affecting nursing education in Ghana. Recommendations include developing culturally specific competencies, strengthening partnerships between educational institutions and healthcare facilities, and implementing a comprehensive capacity building strategy. These findings are significant for enhancing the quality and relevance of nursing and midwifery education in Ghana, potentially leading to improved healthcare outcomes.

**Keywords:** Competency-Based Education, Nursing Education, Clinical Placement Challenges, Cultural Competence, Healthcare System Integration

Cite this article as: Benewaa, D., Agyei, RB., Stephen Aboagye, S., Danso, KO., & Owusu-Agyeman, AK. (2024). Bridging Theory and Practice: An Evaluation of Competency-Based Education Models in Ghana's Nursing and Midwifery Training Colleges. *Ghana Journal of Nursing and Midwifery (GJNMID)*, 2024 (3). <https://doi.org/10.69600/gjnmid.2024.v01.i03.156-174>



## Introduction

The implementation of Competency-Based Education (CBE) in nursing and midwifery training colleges in Ghana represents a significant shift in healthcare education, aimed at bridging the gap between theory and practice. This paper examines the complexities of CBE implementation in the Ghanaian context, drawing on a rich body of literature that highlights the interplay of cultural, systemic, and educational factors influencing nursing education.

Recent studies have underscored the challenges facing nursing education in Ghana, including inadequate clinical placements (Atakro et al., 2019), quality assurance issues (Effah et al., 2019), and the need for culturally competent care (Korsah, 2011; Dzomeku et al., 2017). The comprehensive health sector assessment by Saleh (2013) further illuminates the systemic challenges that impact nursing education and practice. These studies, among others, have influenced the development of this paper by highlighting the multifaceted nature of CBE implementation in Ghana.

The current literature, while valuable, often addresses these challenges in isolation. This paper aims to provide a holistic analysis of CBE implementation in Ghana's nursing and midwifery education, examining the interconnectedness of various factors and their implications for educational outcomes.

The main objective of this paper is to evaluate the implementation of CBE models in Ghana's nursing and midwifery training colleges, focusing on bridging the gap between theory and practice. Specific objectives include:

1. To analyze the cultural and contextual factors influencing CBE implementation in Ghana.
2. To examine the challenges in clinical placements and quality assurance within the context of CBE.
3. To assess the adequacy of current capacity building efforts in supporting CBE implementation.

By addressing these objectives, this paper aims to contribute to the growing body of knowledge on CBE in developing countries and provide evidence-based recommendations for enhancing nursing and midwifery education in Ghana.

## Significance of the Paper:

This paper holds substantial significance for nursing and midwifery education in Ghana. By critically analyzing the implementation of Competency-Based Education (CBE) models, it provides valuable insights into the challenges and opportunities facing nursing education in the country. The comprehensive examination of cultural factors, healthcare system context, and educational challenges offers a holistic view that can inform policy-making and curriculum development. The paper's recommendations for improving clinical placements, enhancing quality assurance, and integrating cultural competencies can guide educational institutions in refining their approaches to CBE implementation. Furthermore, by highlighting the need for stronger partnerships between educational institutions and healthcare facilities, the paper paves the way for more effective bridging of the theory-practice gap. This research can serve as a catalyst for



transformative changes in nursing and midwifery education in Ghana, potentially leading to the production of more competent, culturally sensitive, and practice-ready healthcare professionals, ultimately contributing to improved healthcare outcomes for the Ghanaian population.

### **Scientific Knowledge Contribution:**

This paper makes significant contributions to the scientific literature on Competency-Based Education (CBE) in Ghana and other developing countries. Firstly, it provides a comprehensive analysis of the interplay between cultural factors, healthcare system context, and educational challenges in implementing CBE, an area that has been understudied in the context of developing countries. The paper's integrative approach in examining these factors offers a novel framework for understanding the complexities of CBE implementation in resource-constrained settings. Secondly, the research highlights the critical importance of cultural competence in CBE models, contributing to the growing body of literature on culturally responsive healthcare education. Thirdly, the paper's analysis of capacity building needs in relation to CBE implementation provides valuable insights for other developing countries facing similar challenges. By identifying gaps in current approaches and offering evidence-based recommendations, this research advances the scientific understanding of effective CBE implementation strategies in diverse cultural and socioeconomic contexts. These contributions can inform future research directions and guide evidence-based educational reforms in nursing and healthcare education across developing countries.

### **Methodology:**

The methodology employed in this paper draws inspiration from several key studies mentioned in the references, particularly in terms of its comprehensive literature review and qualitative analysis approach. This method has been effectively utilized in various contexts within nursing and midwifery education research in Ghana and other developing countries.

Kyei-Dompim et al. (2020) and Asare & Opoku (2017) conducted concept analyses of competency-based education in nursing, employing a rigorous literature review methodology. Their approach to synthesizing and analyzing existing literature to clarify key concepts has been replicated in this paper, particularly in the exploration of CBE implementation challenges and cultural factors. On the hand hand, Atakro et al. (2019) utilized a qualitative descriptive design with focus group discussions to explore clinical placement experiences. While this paper didn't conduct primary qualitative research, it adopted a similar approach to analyzing and synthesizing qualitative findings from multiple studies to gain a comprehensive understanding of clinical placement challenges.

The comprehensive health sector assessment by Saleh (2013) provided a model for analyzing the healthcare system context. This paper replicated this approach by synthesizing findings from multiple studies to provide a holistic view of the healthcare system's impact on nursing education. While, Boateng et al. (2017) employed a qualitative study design to examine capacity building efforts. This paper similarly analyzed capacity building initiatives, drawing on multiple studies to provide a comprehensive view of current efforts and needs. However, Effah et al. (2019) used a mixed-methods approach to study quality assurance in higher education.



While this paper didn't employ mixed methods directly, it incorporated the analysis of both qualitative and quantitative findings from various studies to provide a comprehensive view of quality assurance challenges.

Other researchers can replicate this methodology by:

1. Conducting a comprehensive literature review of relevant studies in their context.
2. Synthesizing findings across multiple studies to identify key themes and challenges.
3. Analyzing the interplay between different factors (e.g., cultural, systemic, educational) affecting CBE implementation.
4. Drawing on both qualitative and quantitative findings to provide a holistic view of the research topic.
5. Using concept analysis techniques to clarify and define key concepts relevant to their research.

This methodological approach is particularly valuable for researchers in developing countries where primary data collection may be challenging due to resource constraints. It allows for a comprehensive analysis of existing research to identify gaps, synthesize current knowledge, and provide evidence-based recommendations for policy and practice.

## **Findings:**

### **Implementation of Competency-Based Education in Ghana's Nursing and Midwifery Education**

The implementation of Competency-Based Education (CBE) in Ghana's nursing and midwifery training colleges represents a significant shift in the approach to healthcare education. This analysis will explore the various aspects of CBE implementation, including its conceptual framework, challenges, strategies, and implications for the Ghanaian healthcare system.

### **Conceptual Framework of CBE in Nursing and Midwifery Education**

To understand the implementation of CBE in Ghana, it's crucial to first grasp its conceptual framework. Kyei-Dompim et al. (2020) and Asare & Opoku (2017) have conducted concept analyses of CBE in nursing. These studies provide a theoretical foundation for understanding CBE in the Ghanaian context.

CBE is characterized by its focus on measurable outcomes and the demonstration of specific competencies. In nursing education, this translates to a curriculum designed around the knowledge, skills, and attitudes essential for effective nursing practice. The shift from traditional time-based educational models to CBE aims to produce graduates who are better prepared for the realities of clinical practice.

### **Implementation Challenges**

The implementation of CBE in Ghana's nursing education system has not been without challenges. Agyeman



& Kyei-Dompim (2021) specifically discuss the challenges faced by nurse educators in practicing competency-based curriculum. Some of the key challenges identified include:

1. Resource Constraints: Limited resources, including teaching materials, equipment, and technology, hinder the effective implementation of CBE.
2. Faculty Preparation: Many educators lack proper training in CBE methodologies, making it difficult to transition from traditional teaching methods.
3. Assessment Difficulties: Designing and implementing competency-based assessments that accurately measure students' abilities in real-world scenarios is challenging.
4. Clinical Placement Issues: Atakro et al. (2019) highlight challenges in clinical placements, which are crucial for the practical component of CBE. These include inadequate supervision, limited learning opportunities, and disconnects between theory and practice.
5. Resistance to Change: Both educators and students may resist the shift to CBE due to familiarity with traditional educational models.
6. Alignment with Healthcare System Needs: Ensuring that the competencies taught align with the evolving needs of Ghana's healthcare system presents an ongoing challenge.

### **Strategies for Effective Implementation**

Despite these challenges, several strategies have been employed to facilitate the effective implementation of CBE in Ghana's nursing education:

1. Capacity Building: Asamani et al. (2015) emphasize the importance of capacity building for nurses. This extends to nurse educators, who require training in CBE methodologies and assessment techniques.
2. Curriculum Redesign: The transition to CBE necessitates a comprehensive redesign of nursing curricula to focus on specific competencies required in the Ghanaian healthcare context.
3. Improved Clinical Partnerships: Strengthening partnerships between educational institutions and healthcare facilities can enhance the quality of clinical placements, as suggested by the findings of Atakro et al. (2019).
4. Quality Assurance Mechanisms: Effah et al. (2019) discuss quality assurance in Ghanaian higher education. Implementing robust quality assurance processes is crucial for maintaining standards in CBE implementation.
5. Stakeholder Engagement: Engaging all stakeholders, including students, educators, healthcare professionals, and policymakers, in the design and implementation of CBE can increase buy-in and effectiveness.
6. Technology Integration: Leveraging technology for simulation-based learning and assessment can help



bridge the gap between theory and practice.

## Implications for Ghana's Healthcare System

The implementation of CBE in nursing and midwifery education has significant implications for Ghana's healthcare system:

1. **Workforce Readiness:** CBE aims to produce graduates who are better prepared for clinical practice. This aligns with the findings of Bell et al. (2013), who analyzed priorities for scaling up the nursing workforce in Ghana.
2. **Healthcare Quality Improvement:** By focusing on specific competencies, CBE has the potential to improve the quality of healthcare delivery. This is particularly relevant in the context of Ghana's efforts to strengthen its health systems, as discussed by Awoonor-Williams et al. (2013).
3. **Addressing Healthcare Challenges:** CBE can be tailored to address specific healthcare challenges in Ghana. For instance, Dzomeku et al. (2017) highlight issues in childbirth care, which could be addressed through targeted competencies in midwifery education.
4. **Cultural Competence:** Korsah (2011) explores nurses' interactions with patients in Ghana. CBE can incorporate cultural competence as a key skill, improving patient-provider interactions.
5. **Retention of Healthcare Workers:** By producing more competent and confident graduates, CBE may contribute to better retention of healthcare workers, addressing issues highlighted by Abuosi & Abor (2015) regarding migration intentions of nursing students.
6. **Continuous Professional Development:** The CBE model encourages lifelong learning, which is crucial for keeping the nursing workforce updated with evolving healthcare needs and technologies.

## Contextual Considerations

It's important to note that the implementation of CBE in Ghana must consider the unique contextual factors of the country's healthcare system and cultural landscape. Saleh (2013) provides a comprehensive assessment of Ghana's health sector, highlighting systemic challenges that CBE implementation must navigate.

Moreover, cultural and societal factors play a significant role in healthcare delivery and education. Studies like Hayfron-Benjamin et al. (2018) on HIV disclosure challenges and Laar et al. (2018) on the use of non-prescription remedies highlight the complex sociocultural context in which nurses operate. CBE implementation must be sensitive to these factors to produce culturally competent healthcare providers.

## Future Directions

As Ghana continues to implement and refine its CBE model in nursing and midwifery education, several areas warrant further attention:



1. Longitudinal Studies: Long-term studies are needed to assess the impact of CBE on graduate performance, patient outcomes, and overall healthcare quality.
2. Standardization and Accreditation: Developing standardized competencies and accreditation processes for CBE programs will be crucial for maintaining quality across institutions.
3. Inter-professional Education: Integrating CBE with inter-professional education could enhance collaborative practice skills, crucial for effective healthcare delivery.
4. Technology-Enhanced Learning: Further exploration of e-learning technologies, as discussed by Yakubu & Dasuki (2019) in the Nigerian context, could support CBE implementation in Ghana.
5. Community-Based Education: Incorporating community-based education elements, building on Ghana's community-based health planning and services initiative (Nyonator et al., 2005), could enhance the relevance of CBE to local healthcare needs.

The implementation of Competency-Based Education in Ghana's nursing and midwifery training colleges represents a significant step towards improving healthcare education and, by extension, healthcare delivery. While challenges exist, the potential benefits in terms of workforce readiness, healthcare quality, and addressing specific health challenges are substantial. Continued research, stakeholder engagement, and adaptive strategies will be crucial for the successful integration of CBE into Ghana's nursing education landscape and its broader healthcare system.

## Concept Analysis in Competency-Based Nursing Education

Concept analysis is a critical methodological approach in nursing research and education that helps clarify, refine, and define the key attributes of a particular concept. In the context of Competency-Based Education in nursing, several studies have employed concept analysis to provide a theoretical foundation for understanding and implementing CBE in Ghana.

### 1. Competency-Based Education (CBE)

The primary concept of interest is Competency-Based Education itself. Kyei-Dompim et al. (2020) and Asare & Opoku (2017) have conducted concept analyses of CBE in nursing, which serve as foundational works for understanding this educational approach in the Ghanaian context.

Key Attributes:

- Outcome-oriented
- Learner-centered
- Practice-focused
- Time-variable
- Antecedents:
- Need for practice-ready graduates



- Gaps in traditional education models
- Evolving healthcare needs

Consequences:

- Improved clinical competence
- Enhanced workforce readiness
- Potential for standardized assessment

These studies employed qualitative methodologies, primarily literature reviews and critical analysis, to identify and synthesize the key attributes, antecedents, and consequences of CBE. While not directly quantified, the frequency of these elements appearing in the literature was likely considered in determining their significance.

The concept analysis of CBE influences the conceptualization of this paper by providing a clear theoretical framework for understanding what CBE entails in nursing education. It helps in identifying the essential components that should be present in a CBE model and the expected outcomes of its implementation.

## 2. Clinical Competence

Clinical competence is a crucial concept within CBE. While not explicitly analyzed as a concept in the provided studies, it is inherent in discussions of CBE implementation.

Key Attributes:

- Knowledge application
- Skill demonstration
- Professional behavior
- Critical thinking

Atakro et al. (2019) indirectly address this concept through their study on clinical placement experiences. They used a qualitative descriptive design with focus group discussions to explore students' experiences. While not quantified in the traditional sense, the frequency and emphasis of certain themes in student responses provide insight into the perceived importance of various aspects of clinical competence.

This concept influences the paper's conceptualization by highlighting the need for CBE models to effectively bridge theory and practice, ensuring that students develop and demonstrate clinical competence.

## 3. Quality Assurance

Quality assurance emerges as another important concept in the implementation of CBE. Effah et al. (2019) explore this concept from students' perspectives in Ghanaian higher education institutions.

Key Attributes:





- Standardization
- Continuous improvement
- Stakeholder involvement
- Accountability

The study by Effah et al. (2019) used a mixed-methods approach, combining questionnaires and interviews. They quantified students' perceptions using descriptive statistics and Likert-scale responses, providing a measurable assessment of the perceived effectiveness of quality assurance mechanisms.

This concept influences the paper by emphasizing the need for robust quality assurance processes in CBE implementation to ensure consistency and effectiveness across nursing education programs.

#### 4. Capacity Building

Capacity building is a recurring concept in the context of implementing new educational models like CBE. Asamani et al. (2015) and Boateng et al. (2017) highlight its importance in the Ghanaian healthcare context.

Key Attributes:

- Skill development
- Resource allocation
- Continuous learning
- Institutional strengthening

These studies primarily used qualitative methods, including interviews and focus group discussions. While not strictly quantified, the emphasis placed on various aspects of capacity building by participants provides insight into its perceived importance and components.

The concept of capacity building influences the paper by highlighting the need for comprehensive strategies to prepare institutions, educators, and students for the transition to CBE.

#### 5. Cultural Competence

Cultural competence emerges as a critical concept in the Ghanaian healthcare context. Studies like Korsah (2011) and Dzomeku et al. (2017) touch on this concept in their exploration of nurse-patient interactions and childbirth care experiences.

Key Attributes:

- Cultural awareness
- Respect for diversity
- Effective cross-cultural communication
- Culturally appropriate care

These studies employed qualitative methodologies, including phenomenological approaches and narrative



analysis. While not quantified in the traditional sense, the recurrence and emphasis of cultural themes in participant narratives indicate their significance.

This concept influences the paper's conceptualization by emphasizing the need for CBE models to incorporate cultural competence as a key competency, ensuring that graduates are prepared to provide culturally appropriate care in the Ghanaian context.

## 6. Healthcare System Integration

The concept of healthcare system integration is crucial for ensuring that CBE aligns with the needs and realities of Ghana's healthcare system. Studies like Awoonor-Williams et al. (2013) and Saleh (2013) provide comprehensive assessments of Ghana's health sector.

Key Attributes:

- Alignment with national health priorities
- Responsiveness to local health needs
- Inter-professional collaboration
- Health system strengthening

These studies used mixed methodologies, including quantitative analysis of health indicators and qualitative assessments of health system functioning. The quantification of health outcomes and system performance metrics provides a basis for understanding the context in which CBE must operate.

This concept influences the paper by highlighting the need for CBE models to be responsive to the specific needs and challenges of Ghana's healthcare system.

## 7. E-learning and Technology Integration

While not a primary focus of the provided studies, the concept of e-learning and technology integration in education emerges as relevant, especially in the context of modern CBE implementation. Yakubu & Dasuki (2019), although focused on Nigeria, provide insights applicable to the Ghanaian context.

Key Attributes:

- Digital literacy
- Access to technology
- Interactive learning platforms
- Remote assessment capabilities

This study used a quantitative approach, employing structural equation modeling to analyze factors affecting e-learning adoption. The quantification of various factors influencing technology adoption provides valuable insights for CBE implementation strategies.

This concept influences the paper by suggesting potential avenues for enhancing CBE implementation



through technology integration, particularly in addressing challenges related to resource constraints and clinical placement limitations.

## Conceptualization Synthesis

The concept analysis of these various elements collectively influences the conceptualization of CBE implementation in Ghana's nursing and midwifery education in several ways:

1. **Holistic Approach:** The analysis reveals the need for a holistic approach to CBE implementation, considering not just educational methods but also cultural, systemic, and technological factors.
2. **Contextual Adaptation:** The emphasis on cultural competence and healthcare system integration highlights the importance of adapting CBE models to the specific Ghanaian context.
3. **Measurement Challenges:** The predominantly qualitative nature of many studies points to the challenges in quantifying certain aspects of CBE implementation, suggesting the need for innovative assessment methods.
4. **Stakeholder Involvement:** The recurring theme of stakeholder perspectives across various concepts underscores the importance of inclusive approaches in CBE design and implementation.
5. **Continuous Improvement:** The quality assurance and capacity building concepts emphasize the need for ongoing evaluation and refinement of CBE models.
6. **Technology as an Enabler:** The emergence of e-learning as a relevant concept suggests the potential for technology to address some of the challenges in CBE implementation.
7. **Competency Definition:** The analysis of clinical competence and cultural competence concepts informs the definition of key competencies that should be central to CBE in nursing education.

In summary, this concept analysis provides a comprehensive framework for understanding the multifaceted nature of CBE implementation in Ghana's nursing and midwifery education. It highlights the complexities involved and the need for a nuanced, context-specific approach. The synthesis of these concepts informs a conceptualization of CBE that is holistic, culturally sensitive, technologically informed, and closely aligned with the realities of Ghana's healthcare system. This conceptual foundation is crucial for developing effective strategies for implementing and evaluating CBE in nursing education, ultimately aiming to improve the quality of healthcare delivery in Ghana.

## Comparative Factor Analysis

The implementation of Competency-Based Education (CBE) in Ghana's nursing and midwifery training colleges is a complex endeavor that requires a deep understanding of various interconnected factors. This analysis will explore the cultural and contextual factors, healthcare system context, challenges in nursing education, and capacity building efforts in Ghana, examining their interactivity and adequacy in addressing the current situation in nursing training colleges.



## **Cultural and Contextual Factor Analysis**

Ghana's rich cultural tapestry plays a significant role in shaping the healthcare landscape and, by extension, nursing education. The studies by Dzomeku et al. (2017) and Korsah (2011) provide valuable insights into the cultural nuances that influence healthcare delivery and nursing practice in Ghana. Dzomeku et al.'s exploration of women's experiences during childbirth care in public health facilities in Kumasi reveals deeply ingrained cultural beliefs and practices that impact patient-provider interactions. These cultural factors extend beyond the clinical setting and permeate the educational environment, influencing how nursing students perceive their roles and responsibilities.

Korsah's study on nurses' interactions with patients at the Holy Family Hospital in Techiman further illuminates the importance of cultural competence in nursing practice. The narratives collected in this study highlight the need for nursing education to incorporate cultural sensitivity and awareness as core competencies. This cultural context presents both challenges and opportunities for CBE implementation in Ghana's nursing colleges.

One of the key challenges is the potential disconnect between Western-influenced nursing theories and local cultural practices. Nursing students must navigate this complex terrain, learning to balance evidence-based practices with cultural sensitivity. The CBE model, with its emphasis on demonstrable competencies, offers a framework for addressing this challenge by allowing for the integration of culturally specific skills and knowledge into the curriculum.

However, the current implementation of CBE in Ghana's nursing colleges may not fully capture the nuances of these cultural factors. While there is recognition of the importance of cultural competence, the studies suggest that more work needs to be done to systematically incorporate cultural and contextual factors into the competency frameworks and assessment methods.

## **Healthcare System Context**

The healthcare system in Ghana provides the broader context within which nursing education operates. Saleh's (2013) comprehensive assessment of Ghana's health sector offers a detailed overview of the systemic challenges and opportunities. The study highlights issues such as resource constraints, urban-rural disparities in healthcare access, and the ongoing efforts to achieve universal health coverage.

Awoonor-Williams et al. (2013) further illuminate the complexities of Ghana's healthcare system through their examination of the Ghana Essential Health Interventions Program. This study underscores the importance of health systems strengthening and its impact on maternal and child survival. The implications for nursing education are significant, as nurses play a crucial role in delivering essential health interventions, particularly in rural and underserved areas.

The healthcare system context presents several challenges for CBE implementation in nursing colleges. First, there is the need to align competencies taught in nursing programs with the realities of Ghana's healthcare system. This includes preparing nurses to work effectively in resource-constrained settings and to address the



specific health challenges prevalent in Ghana, such as maternal and child health issues.

Second, the urban-rural divide in healthcare access and quality necessitates a nuanced approach to clinical placements and competency development. Nursing students need exposure to both urban and rural healthcare settings to develop a comprehensive skill set that is applicable across diverse contexts.

The current CBE implementation in Ghana's nursing colleges shows some progress in addressing these contextual factors. For instance, there are efforts to incorporate community health rotations and rural placements into nursing curricula. However, the studies suggest that there is room for improvement in terms of systematically aligning competencies with the specific needs and challenges of Ghana's healthcare system.

### **Challenges in Nursing Education**

The challenges in nursing education in Ghana are multifaceted and interrelated with both cultural factors and the healthcare system context. Bell et al. (2013) provide a critical analysis of nursing education in Ghana, highlighting priorities for scaling up the nursing workforce. Their study reveals several key challenges, including inadequate infrastructure, limited faculty capacity, and gaps in curriculum relevance.

One significant challenge is the theory-practice gap, which is exacerbated by limited clinical placement opportunities and inadequate supervision during clinical rotations. Atakro et al. (2019) delve deeper into this issue, exploring the clinical placement experiences of undergraduate nursing students. Their findings reveal challenges such as limited learning opportunities, inadequate resources, and sometimes unprofessional attitudes from clinical staff.

Another crucial challenge is the need to keep pace with rapidly evolving healthcare technologies and practices. The nursing curriculum must be dynamic and responsive to these changes, which requires ongoing faculty development and curriculum revision. However, resource constraints often hinder these efforts, as highlighted in several of the studies.

The implementation of CBE in Ghana's nursing colleges has the potential to address some of these challenges. By focusing on demonstrable competencies rather than time-based progression, CBE can help bridge the theory-practice gap and ensure that graduates are better prepared for the realities of clinical practice. However, the success of CBE implementation is contingent upon addressing the underlying systemic issues, such as inadequate resources and limited faculty capacity.

### **Capacity Building**

Capacity building emerges as a critical factor in addressing the challenges in nursing education and successfully implementing CBE. Asamani et al. (2015) emphasize the imperative of capacity building for nurses in Ghana, highlighting its importance not only for individual professional development but also for strengthening the overall healthcare system.

Boateng et al. (2017) provide further insights into capacity building efforts, focusing on the role of district health management teams in building the capacity of frontline health workers. Their study underscores the



importance of a systemic approach to capacity building that encompasses not only individual skills development but also organizational and institutional strengthening.

In the context of CBE implementation in nursing colleges, capacity building efforts need to focus on several key areas. First, there is a need for comprehensive faculty development programs to equip nurse educators with the skills and knowledge necessary to implement CBE effectively. This includes training in competency-based assessment methods, curriculum design, and the use of technology in education.

Second, capacity building must extend to clinical preceptors and mentors who play a crucial role in students' clinical learning experiences. Enhancing their ability to provide effective supervision and assessment in line with CBE principles is essential for bridging the theory-practice gap.

Third, institutional capacity building is necessary to create supportive environments for CBE implementation. This includes developing robust quality assurance mechanisms, improving infrastructure and resources, and fostering partnerships between educational institutions and healthcare facilities.

The current capacity building efforts in Ghana's nursing education sector show some progress, particularly in terms of individual skills development. However, the studies suggest that a more comprehensive and systematic approach to capacity building is needed to fully support CBE implementation and address the complex challenges facing nursing education in Ghana.

### **Interactivity and Adequacy**

The interactivity between cultural and contextual factors, healthcare system context, challenges in nursing education, and capacity building efforts is complex and multifaceted. Cultural factors influence both the healthcare system and nursing education, shaping patient expectations, healthcare practices, and the competencies required of nurses. The healthcare system context, in turn, defines the environment in which nurses must operate and informs the competencies that should be prioritized in nursing education.

The challenges in nursing education are deeply intertwined with both cultural factors and the healthcare system context. For instance, the theory-practice gap is exacerbated by cultural disconnects between classroom teaching and clinical realities, as well as by resource constraints within the healthcare system. Capacity building efforts, while aimed at addressing these challenges, must navigate the complex interplay of cultural, systemic, and educational factors.

In assessing the adequacy of current approaches in addressing the situation at nursing training colleges in Ghana, several observations can be made. The recognition of the importance of cultural competence in nursing education is a positive step. However, the studies suggest that more systematic efforts are needed to integrate cultural and contextual factors into competency frameworks and assessment methods.

The alignment of nursing education with the healthcare system context shows some progress, particularly in efforts to expose students to diverse clinical settings. However, there is room for improvement in terms of systematically mapping competencies to the specific needs and challenges of Ghana's healthcare system.



The implementation of CBE in nursing colleges represents a significant step towards addressing some of the key challenges in nursing education, particularly the theory-practice gap. However, its effectiveness is hampered by underlying systemic issues such as resource constraints and limited faculty capacity. The current capacity building efforts, while valuable, appear inadequate to fully support the comprehensive implementation of CBE and address the complex challenges facing nursing education in Ghana.

To enhance the adequacy of current approaches, several steps could be considered. First, there is a need for a more holistic and integrated approach to CBE implementation that explicitly addresses cultural and contextual factors. This could involve developing culturally specific competencies and assessment methods that reflect the realities of healthcare delivery in Ghana.

Second, stronger partnerships between nursing colleges, healthcare facilities, and community organizations could help bridge the gap between education and practice. These partnerships could facilitate more meaningful clinical placements, community-based learning experiences, and opportunities for faculty and students to engage with the healthcare system in meaningful ways.

Third, a more comprehensive and systematic approach to capacity building is needed. This should encompass not only individual skills development but also institutional strengthening and system-wide improvements. Investing in faculty development, enhancing clinical supervision capacity, and improving educational infrastructure are critical components of this approach.

Fourth, there is a need for ongoing research and evaluation to assess the effectiveness of CBE implementation and inform continuous improvement efforts. This could involve longitudinal studies tracking the performance of graduates, as well as more in-depth explorations of the factors influencing the success of CBE in different contexts within Ghana.

Summarily, while the current approaches to implementing CBE in Ghana's nursing training colleges show promise, they are not yet fully adequate to address the complex interplay of cultural, contextual, systemic, and educational factors. A more integrated, culturally sensitive, and systemically aligned approach is needed to fully realize the potential of CBE in preparing competent and contextually relevant nursing professionals for Ghana's healthcare system. This approach must be underpinned by robust capacity building efforts and a commitment to ongoing research and evaluation. By addressing these interconnected factors in a comprehensive manner, Ghana can enhance the quality and relevance of its nursing education, ultimately contributing to improved healthcare outcomes for its population.

## **Conclusion:**

The implementation of Competency-Based Education (CBE) in Ghana's nursing and midwifery training colleges represents a significant step towards improving healthcare education and, by extension, healthcare delivery. This comprehensive analysis has revealed the complex interplay of cultural, contextual, and systemic factors that influence the effectiveness of CBE implementation.



While CBE shows promise in addressing some of the key challenges in nursing education, particularly the theory-practice gap, its current implementation falls short of fully addressing the multifaceted issues facing nursing education in Ghana. The analysis has highlighted significant challenges in clinical placements, quality assurance, and the alignment of competencies with both cultural nuances and healthcare system needs.

The cultural and contextual factors deeply embedded in Ghana's healthcare landscape necessitate a more nuanced approach to CBE implementation. The current models, while acknowledging the importance of cultural competence, have not fully integrated these factors into competency frameworks and assessment methods.

Furthermore, the healthcare system context in Ghana presents unique challenges that must be addressed in nursing education. The urban-rural disparities in healthcare access and quality, resource constraints, and specific health challenges require nursing programs to prepare graduates for diverse and often challenging work environments.

Capacity building efforts, while valuable, have been found inadequate to fully support the comprehensive implementation of CBE. There is a clear need for more systematic and holistic approaches to capacity building that encompass individual skills development, institutional strengthening, and system-wide improvements.

While the move towards CBE in Ghana's nursing and midwifery education is a positive development, current approaches are not yet fully adequate to address the complex interplay of factors affecting nursing education in the country. A more integrated, culturally sensitive, and systemically aligned approach is needed to realize the full potential of CBE in preparing competent and contextually relevant nursing professionals for Ghana's healthcare system.

## **Recommendations:**

1. **Develop Culturally Specific Competencies:** Nursing colleges should collaborate with cultural experts, healthcare professionals, and community leaders to develop competency frameworks that explicitly incorporate cultural and contextual factors relevant to Ghana. This should include competencies related to traditional health beliefs, communication across diverse cultural groups, and culturally sensitive care practices.
2. **Enhance Clinical Placement Quality:** Strengthen partnerships between nursing colleges and healthcare facilities to improve the quality of clinical placements. This could involve developing structured clinical mentorship programs, increasing the duration and diversity of clinical rotations, and implementing robust feedback mechanisms for continuous improvement.
3. **Implement Comprehensive Quality Assurance Mechanisms:** Develop and implement standardized quality assurance processes across nursing colleges, focusing on both educational processes and outcomes. This should include regular curriculum reviews, stakeholder feedback systems, and external audits to ensure consistency and quality in CBE implementation.





4. Invest in Faculty Development: Implement comprehensive faculty development programs focusing on CBE methodologies, competency-based assessment techniques, and the integration of technology in nursing education. This should include opportunities for faculty to engage in continued clinical practice to maintain relevance.

5. Strengthen Healthcare System Integration: Align nursing competencies more closely with the specific needs and challenges of Ghana's healthcare system. This could involve regular consultations with health ministry officials, healthcare providers, and community health workers to ensure curriculum relevance.

6. Enhance Technology Integration: Invest in technological infrastructure and training to support CBE implementation. This could include the use of simulation labs, e-learning platforms, and mobile health technologies to enhance learning experiences and bridge the theory-practice gap.

7. Promote Inter-professional Education: Incorporate inter-professional education experiences into nursing programs to better prepare students for collaborative practice in diverse healthcare settings.

8. Conduct Ongoing Research and Evaluation: Implement a systematic research agenda to continuously evaluate the effectiveness of CBE implementation in Ghana. This should include longitudinal studies tracking graduate performance and impact on healthcare outcomes.

9. Address Resource Constraints: Advocate for increased funding and resource allocation for nursing education at both institutional and national levels. This could involve exploring public-private partnerships and international collaborations to enhance resources for CBE implementation.

10. Foster Community Engagement: Develop community engagement programs that allow nursing students to gain hands-on experience in diverse community settings, enhancing their understanding of social determinants of health and community health needs.

By implementing these recommendations, Ghana can enhance the quality and relevance of its nursing and midwifery education, ultimately contributing to improved healthcare outcomes for its population. These steps will not only strengthen the implementation of CBE but also position Ghana as a leader in innovative nursing education in the region.

## References

1. Abuosi, A. A., & Abor, P. A. (2015). Migration intentions of nursing students in Ghana: Implications for human resource development in the health sector. *Journal of International Migration and Integration*, 16(3), 593-606.
2. Adatara, P., Strumpher, J., & Ricks, E. (2019). A qualitative study on rural women's experiences relating to the utilisation of birth care provided by skilled birth attendants in the rural areas of Bongo District in Ghana. *BMC Pregnancy and Childbirth*, 19(1), 195.
3. Agyeman, N. K., & Kyei-Dompim, J. (2021). Challenges and coping strategies in practicing competency-based curriculum: Perspectives from nurse educators in Ghana. *Nurse Education in Practice*, 50, 102935.



4. Asamani, J. A., Amertil, N. P., & Chebere, M. (2015). The imperative of capacity building of nurses in Ghana. *Ghana Nursing Journal*, 6(1), 20-28.
5. Asare, G. E., & Opoku, D. (2017). Competency-based education in nursing: A concept analysis. *International Journal of Nursing & Clinical Practices*, 4, 243.
6. Atakro, C. A., Armah, E., Menlah, A., Garti, I., Addo, S. B., Adatar, P., & Boni, G. S. (2019). Clinical placement experiences by undergraduate nursing students in selected teaching hospitals in Ghana. *BMC Nursing*, 18(1), 1-10.
7. Awoonor-Williams, J. K., Bawah, A. A., Nyonator, F. K., Asuru, R., Oduro, A., Ofosu, A., & Phillips, J. F. (2013). The Ghana essential health interventions program: a plausibility trial of the impact of health systems strengthening on maternal & child survival. *BMC Health Services Research*, 13(2), S3.
8. Baffour-Awuah, E., Mwini-Nyaledzigbor, P. P., & Richter, S. (2015). Enhancing focused antenatal care in Ghana: An exploration of perceptions and experiences. *Journal of Nursing Education and Practice*, 5(10), 98.
9. Bell, S. A., Rominski, S., Bam, V., Donkor, E., & Lori, J. (2013). Analysis of nursing education in Ghana: Priorities for scaling-up the nursing workforce. *Nursing & Health Sciences*, 15(2), 244-249.
10. Boateng, M. A., Agyei-Baffour, P., Angel, S., & Enemark, U. (2017). The role of district health management teams in capacity building of frontline health workers: A qualitative study in the Eastern Region of Ghana. *PloS One*, 12(3), e0174536.
11. Boateng, W. (2012). Evaluating the efficacy of focus group discussion (FGD) in qualitative social research. *International Journal of Business and Social Science*, 3(7).
12. Donkor, N. T., & Andrews, L. D. (2011). 21st century nursing practice in Ghana: Challenges and opportunities. *International Nursing Review*, 58(2), 218-224.
13. Dzomeku, V. M., van Wyk, B., & Lori, J. R. (2017). Experiences of women receiving childbirth care from public health facilities in Kumasi, Ghana. *Midwifery*, 55, 90-95.
14. Effah, B., Nuhu, H., & Nyarko, M. A. (2019). Quality assurance in Ghanaian higher education institutions: Perspectives of students on the objectives of internal quality assurance units. *Quality in Higher Education*, 25(3), 248-263.
15. Agyeman, N. K., & Kyei-Dompim, J. (2021). Challenges and coping strategies in practicing competency-based curriculum: Perspectives from nurse educators in Ghana. *Nurse Education in Practice*, 50, 102935.
16. Gyedu, A., Debrah, S., Agbedinu, K., Goodman, S. K., Plange-Rhule, J., Donkor, P., & Mock, C. (2019). In-country training by the Ghana College of Physicians and Surgeons: An initiative that has aided surgeon retention and distribution in Ghana. *World Journal of Surgery*, 43(3), 723-735.
17. Hayfron-Benjamin, A., Obiri-Yeboah, D., & Ayisi-Addo, S. (2018). HIV diagnosis disclosure to infected children and adolescents; challenges of family caregivers in the Central Region of Ghana. *BMC Pediatrics*, 18(1), 365.
18. Korsah, K. A. (2011). Nurses' stories about their interactions with patients at the Holy Family Hospital Techiman, Ghana. *Open Journal of Nursing*, 1(1), 1-9.
19. Kyei-Dompim, J., Agyeman, N. K., & Afram, B. (2020). Competency-based education in nursing: A concept analysis. *Nursing Open*, 7(6), 2056-2066.
20. Laar, A. K., Kwara, A., Nortey, P. A., Ankomah, A. K., Okyerefo, M. P., & Lartey, M. Y. (2018). Use of non-prescription remedies by Ghanaian Human Immunodeficiency Virus-positive persons on antiretroviral therapy. *Frontiers in Public Health*, 6, 73.
21. Lawal, J., Weaver, S., Bryan, V., & Lindo, J. L. (2016). Factors that influence the clinical learning experience of nursing students at a Caribbean school of nursing. *Journal of Nursing Education and Practice*, 6(4), 32-39.
22. Mayega, R. W., Talib, Z. M., Rwagasore, E., Muvunyi, C. M., Ndebwanimana, V., Karenzi, A., ... & Serwadda, D. (2018). Factors influencing career choice and retention among medical laboratory professionals in a rural context: A qualitative study from Eastern



- Rwanda. *Rural and Remote Health*, 18(3), 4514.
23. Mfutso-Bengo, J., Masiye, F., Molyneux, M., Ndebele, P., & Chilungo, A. (2008). Why do people refuse to take part in biomedical research studies? Evidence from a resource-poor area. *Malawi Medical Journal*, 20(2), 57-63.
24. Mill, J. E., Astle, B. J., Ogilvie, L., & Gastaldo, D. (2010). Linking global citizenship, undergraduate nursing education, and professional nursing: Curricular innovation in the 21st century. *Advances in Nursing Science*, 33(3), E1-E11.
25. Msiska, G., Smith, P., & Fawcett, T. (2014). The "lifeworld" of Malawian undergraduate student nurses: The challenge of learning in resource poor clinical settings. *International Journal of Africa Nursing Sciences*, 1, 35-42.
26. Nyonator, F. K., Awoonor-Williams, J. K., Phillips, J. F., Jones, T. C., & Miller, R. A. (2005). The Ghana community-based health planning and services initiative for scaling up service delivery innovation. *Health Policy and Planning*, 20(1), 25-34.
27. Obeng-Odoom, F. (2014). *Oiling the urban economy: land, labour, capital, and the state in Sekondi-Takoradi, Ghana*. Routledge.
28. Opoku, D., Buabeng, T., Owusu-Dabo, E., Brownson, R. C., Agyemang-Duah, W., & Addai-Donkor, K. (2019). Improving the quality of nursing documentation: A collaborative approach. *Journal of Nursing Care Quality*, 34(2), E1-E6.
29. Osei-Ampofo, M., Oduro, G., Oteng, R., Zakariah, A., Jacquet, G., & Donkor, P. (2013). The evolution and current state of emergency care in Ghana. *African Journal of Emergency Medicine*, 3(2), 52-58.
30. Owusu-Addo, E., Renzaho, A. M., & Smith, B. J. (2018). The impact of cash transfers on social determinants of health and health inequalities in sub-Saharan Africa: a systematic review. *Health Policy and Planning*, 33(5), 675-696.
31. Pillai, S., Gopalan, S., & Justine, A. P. (2017). Design-based research: A framework for developing competency-based information literacy modules. *Journal of Academic Librarianship*, 43(5), 448-454.
32. Rominski, S. D., Lori, J., Nakua, E., Dzomeku, V., & Moyer, C. A. (2017). When the baby remains there for a long time, it is going to die so you have to hit her small for the baby to come out: justification of disrespectful and abusive care during childbirth among midwifery students in Ghana. *Health Policy and Planning*, 32(2), 215-224.
33. Saleh, K. (2013). *The health sector in Ghana: a comprehensive assessment*. World Bank Publications.
34. Sarpong, D. B., Quagrainie, K. K., & Opoku, R. (2013). Information sharing in the value chain: An empirical study of Ghana's brong ahafo fish farmers. *African Journal of Agricultural Research*, 8(41), 5083-5089.
35. Yakubu, M. N., & Dasuki, S. I. (2019). Factors affecting the adoption of e-learning technologies among higher education students in Nigeria: A structural equation modelling approach. *Information Development*, 35(3), 492-502.