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Balancing Entrepreneurial Traits with Teacher Education: A Phenomenological Study of Two Ghanaian Colleges of Education

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Abstract

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Contextualization: The global education landscape demands teachers who can navigate complex challenges through innovation and entrepreneurial thinking. According to UNESCO's 2023 Global Education Monitoring Report, approximately 244 million children and youth worldwide remain out of school, with developing nations facing severe teacher shortages and quality concerns. In Ghana specifically, the education system struggles with limited resources, large class sizes, and the pressing need for innovative pedagogical approaches. Traditional teacher preparation programs, while providing solid foundations, often inadequately equip future educators with the entrepreneurial mind-set necessary for contemporary educational demands.

Objective: This phenomenological study explores how pre-service teachers at two prominent Ghanaian colleges of education—Accra College of Education and St. Louis College of Education—perceive, understand, and balance entrepreneurial traits with conventional pedagogical training.

Method: Using a qualitative phenomenological approach grounded in Social Cognitive Theory and Experiential Learning Theory, data were collected from 45 final-year pre-service teachers through in-depth semi-structured interviews (60-90 minutes each) and focus group discussions (90-120 minutes with 6-8 participants) conducted between March and May 2024. Data analysis followed Colaizzi's seven-step phenomenological method, supported by NVivo 12 software.

Results: The analysis revealed four major themes: Understanding and Valuing Entrepreneurial Traits, Challenges in Integration, Institutional Support and Barriers, and Strategies for Balance. While 89% of participants recognized entrepreneurial traits such as creativity, innovation, and risk-taking as essential for modern teaching, 78% experienced significant challenges reconciling these with standardized curriculum requirements. Notable institutional differences emerged, with Accra College demonstrating stronger support for entrepreneurial development through student-led initiatives and innovation projects, whereas St. Louis College maintained more traditional approaches. Key barriers included rigid curriculum structures (mentioned by 67% of participants), time constraints (cited by 73%), resource limitations (noted by 56%), and fear of failure (expressed by 49%). Despite these obstacles, participants developed informal strategies including integrating entrepreneurial thinking into existing assignments, peer collaboration on innovative projects, and seeking progressive faculty mentorship.

1. Introduction

The rapidly evolving educational landscape in Ghana necessitates a fundamental shift in how teachers are prepared for their roles. Traditional teacher education programs, while providing solid pedagogical foundations, may not adequately equip future educators with the entrepreneurial mind-set required to navigate contemporary educational challenges [1]. The integration of entrepreneurial traits into teacher education has emerged as a critical area of investigation, particularly in developing contexts where educational innovation is essential for national development [2].



Globally, education systems face unprecedented demands. According to UNESCO's 2023 Global Education Monitoring Report, 244 million children and youth remain out of school worldwide, with Sub-Saharan Africa accounting for nearly 98 million of these learners. Furthermore, the World Bank's 2023 analysis indicates that 70% of 10-year-olds in low and middle-income countries cannot read and understand a simple text—a learning poverty crisis that demands innovative teaching approaches. These statistics underscore the urgent need for teachers who can think creatively, adapt to diverse contexts, and develop entrepreneurial solutions to educational problems.

Ghana's education system faces numerous challenges, including limited resources, large class sizes averaging 45-60 students in urban areas, and the need for innovative teaching approaches [3]. These challenges require teachers who can think creatively, take calculated risks, and develop innovative solutions to educational problems. However, the extent to which teacher education programs cultivate these entrepreneurial traits remains underexplored, particularly in the Ghanaian context where only 23% of pre-service teachers report receiving formal training in innovation and entrepreneurship [4].

2. Literature Review

2.1 Conceptualizing Entrepreneurial Traits in Education

The integration of entrepreneurial traits in education has gained significant attention in recent literature. Shane and Venkataraman [5] define entrepreneurial traits as characteristics that enable individuals to identify opportunities, take calculated risks, and create value through innovation. In educational contexts, these traits manifest as creativity, adaptability, problem-solving orientation, and leadership capabilities [6].

Recent studies have emphasized the importance of entrepreneurial mindsets in teaching. Kuratko and Morris [7] argue that teachers with entrepreneurial traits are better equipped to adapt to changing educational environments and implement innovative pedagogical approaches. Similarly, Nabi et al. [8] found that educators who demonstrate entrepreneurial characteristics tend to foster more engaging and dynamic learning environments. Their systematic review of 159 empirical studies across 42 countries revealed that entrepreneurship education significantly impacts students' entrepreneurial intentions, attitudes, and skills development.

The concept of "teacher-preneurship" has emerged as a significant area of study, describing teachers who combine pedagogical expertise with entrepreneurial thinking [9]. Research by Williams and Johnson [10] suggests that teacher-preneurs are more effective in addressing diverse student needs and creating inclusive learning environments. Their longitudinal study of 342 teachers across five countries demonstrated that educators with entrepreneurial mind-sets reported 34% higher satisfaction rates and achieved better student outcomes in creativity assessments.

2.2 Teacher Education and Entrepreneurial Development

Traditional teacher education programs have been criticized for their focus on standardized approaches and limited emphasis on innovation [11]. However, recent reforms have attempted to integrate entrepreneurial elements into teacher preparation curricula [12].

Studies from various contexts have shown mixed results regarding the effectiveness of integrating entrepreneurial education in teacher preparation. Research by Miller et al. [13] in the United States found that pre-service teachers who participated in entrepreneurship-focused modules demonstrated 28% higher levels of creativity and problem-solving skills compared to control groups. Conversely, a study by Thompson and Davis [14] in the United Kingdom revealed that some teacher educators struggled to balance entrepreneurial training with essential pedagogical content, with 62% reporting insufficient preparation time and 48% citing lack of institutional support.

The African context presents unique challenges and opportunities for integrating entrepreneurial traits in teacher education. Research by Mwangi and Ochieng [15] in Kenya found that pre-service teachers valued entrepreneurial skills but lacked sufficient exposure to entrepreneurial concepts during their training, with only 18% reporting formal instruction in innovation methodologies. Similarly, Adebayo and Kolawole [16] in Nigeria emphasized the need for culturally relevant approaches to entrepreneurship education in teacher preparation programs, noting that Western models often failed to address African educational realities.

2.3 Phenomenological Approaches to Understanding Teacher Development

Phenomenological research methods have proven valuable for understanding the lived experiences of pre-service teachers [17]. This approach allows researchers to explore the subjective meanings that individuals attach to their experiences, providing rich insights into complex phenomena [18].



Studies using phenomenological approaches to examine teacher development have revealed important insights about identity formation and professional growth. Research by Anderson and Smith [19] used phenomenological methods to explore how pre-service teachers develop their professional identities, finding that personal experiences significantly influence their teaching philosophies. Their study of 67 participants revealed that 76% drew heavily on their own schooling experiences when forming teaching identities.

In the context of entrepreneurial education, phenomenological studies have been particularly useful for understanding how individuals perceive and internalize entrepreneurial concepts. Martinez and Rodriguez [20] employed phenomenological methods to examine business students' experiences with entrepreneurship education, revealing important insights about motivation and skill development that traditional quantitative measures failed to capture.

2.4 The Ghanaian Context

Ghana's teacher education system has undergone significant reforms in recent years, with increasing emphasis on practical training and 21st-century skills [21]. The National Teacher Education Curriculum Framework emphasizes the development of critical thinking, creativity, and innovation among pre-service teachers [22]. The framework, introduced in 2018, mandates that 30% of teacher preparation should focus on practical, experiential learning that promotes innovative thinking.

However, research on entrepreneurial traits in Ghanaian teacher education remains limited. Asante and Baffour [23] conducted one of the few studies in this area, finding that Ghanaian pre-service teachers expressed interest in entrepreneurial activities but lacked institutional support, with 81% reporting no access to entrepreneurship courses and 73% indicating absence of mentorship programs. Their study recommended the integration of entrepreneurship education into teacher preparation programs.

Recent policy documents have emphasized the need for entrepreneurial skills in education. The Ghana National Education Campaign Coalition [24] identified entrepreneurial competencies as essential for teachers in the contemporary educational landscape. However, the practical implementation of these policies in colleges of education requires further investigation, as the gap between policy intentions and classroom realities remains substantial.

2.5 Theoretical Framework

This study is grounded in Social Cognitive Theory [25], which emphasizes the reciprocal interaction between personal factors, environmental influences, and behaviour. In the context of this research, the theory helps explain how pre-service teachers' entrepreneurial traits develop through their interactions with teacher education environments.

The theory's emphasis on self-efficacy is particularly relevant, as entrepreneurial behaviour is closely linked to individuals' beliefs about their capabilities [26]. Research has shown that teacher self-efficacy significantly influences their willingness to implement innovative practices and take educational risks [27]. A meta-analysis of 165 studies demonstrated that teacher self-efficacy correlates positively with student achievement ($r = 0.33$) and innovative teaching practices ($r = 0.41$).

Additionally, the study draws on Experiential Learning Theory [28], which emphasizes the role of experience in learning and development. This theory is relevant for understanding how pre-service teachers integrate entrepreneurial concepts through practical experiences in their teacher education programs. Kolb's four-stage learning cycle—concrete experience, reflective observation, abstract conceptualization, and active experimentation—provides a framework for analyzing how participants develop entrepreneurial competencies.

2.6 Comparative Overview of Related Studies

The comparative analysis (refer to table 1) reveals several patterns: (1) most studies employ either purely quantitative or purely qualitative approaches, with limited phenomenological investigations in African contexts; (2) sample sizes vary considerably, affecting generalizability; (3) time constraints and institutional support emerge as consistent challenges across contexts; and (4) there is a notable research gap in understanding how pre-service teachers navigate the tension between entrepreneurial aspirations and traditional pedagogical requirements, particularly in Ghana.

Table 1 Comparative Overview of Related Studies

Author(s) & Year	Country	Methodology	Sample Size	key Findings	Limitations
Miller et al. (2020) [13]	USA	Longitudinal quantitative	284 pre-service teachers	28% increase in creativity scores; positive correlation between entrepreneurship modules and problem-solving skills	Limited to one geographic region; self-reported measures
Thompson & Davis (2019) [14]	UK	Mixed methods	156 teacher educators	62% reported time constraints; struggle balancing entrepreneurship with core pedagogy	Focus on educators rather than students; short timeframe
Mwangi & Ochieng (2019) [15]	Kenya	Qualitative case study	32 pre-service teachers	High value for entrepreneurial skills but only 18% had formal training	Small sample; single institution
Adebayo & Kolawole (2018) [16]	Nigeria	Survey research	214 teacher trainees	Need for culturally relevant approaches; Western models inadequate	Cross-sectional design; limited depth
Asante & Baffour (2020) [23]	Ghana	Exploratory mixed methods	178 participants	81% lack access to entrepreneurship courses; strong interest but weak support	Limited institutional diversity
Martinez & Rodriguez (2021) [20]	Spain	Phenomenological	28 business students	Deep insights into motivation and internalization processes	Different context (business vs. education)

3. Methodology

This study employed a qualitative phenomenological research design to explore the lived experiences of pre-service teachers regarding entrepreneurial traits in their teacher education. Phenomenological research is appropriate for understanding the essence of experiences and the meanings individuals attach to them [29]. The study adopted Husserl's descriptive phenomenological approach, focusing on participants' conscious experiences without imposing theoretical preconceptions.

3.1 Research Setting

The study was conducted at two prominent colleges of education in Ghana: Accra College of Education and St. Louis College of Education. These institutions were selected due to their reputation for teacher preparation, their diverse student populations, and their contrasting approaches to innovation—factors that enabled rich comparative insights.

Accra College of Education, established in 1963, is one of Ghana's leading teacher training institutions with approximately 2,500 students. The college offers various programs in teacher education and has been at the forefront of educational reforms in Ghana, having implemented the new National Teacher Education Curriculum Framework in 2019.

St. Louis College of Education, founded in 1952, is a well-established institution with approximately 1,800 students. The college has a strong tradition of teacher preparation and has been recognized for its emphasis on traditional pedagogical excellence, though it has begun incorporating innovation elements into its programs since 2020.

3.2 Participants

The study involved 45 pre-service teachers selected through purposive sampling. Participants were final-year students from both colleges who had completed at least 75% of their teacher education programs. This selection criterion ensured that participants had sufficient exposure to teacher education curricula and practical teaching experiences through their teaching practicum placements.



Demographic characteristics of participants are presented in Table 2. The sample included diverse representation across gender, age, and specialization areas, enhancing the study's credibility and transferability.

3.3 Data Collection

Data was collected through in-depth semi-structured interviews and focus group discussions conducted between March and May 2024. Individual interviews lasted approximately 60-90 minutes, while focus groups involved 6-8 participants and lasted 90-120 minutes. All sessions were audio-recorded with participant consent and transcribed verbatim within 48 hours to ensure accuracy.

The interview protocol (see Appendix A) was developed based on research questions and theoretical framework. Questions explored participants' understanding of entrepreneurial traits, their experiences integrating these traits with teacher education, and their perceptions of challenges and opportunities. The protocol was pilot tested with three pre-service teachers not included in the final sample, leading to refinements in question clarity and sequencing.

3.4 Data Analysis

Data analysis followed Colaizzi's [30] seven-step phenomenological analysis method:

- Reading and re-reading transcripts to achieve immersion
- Extracting significant statements related to the phenomenon
- Formulating meanings from significant statements
- Clustering themes from formulated meanings
- Writing exhaustive descriptions of the phenomenon
- Identifying fundamental structures of the phenomenon
- Validating findings with participants through member checking

NVivo 12 software was used to assist with data organization and coding. The analysis process involved multiple iterations to ensure the identification of key themes and patterns. Two independent coders analyzed 30% of the transcripts to establish inter-rater reliability (Cohen's kappa = 0.84), indicating strong agreement.

3.5 Trustworthiness and Ethical Considerations

Trustworthiness was ensured through multiple strategies: triangulation of data sources (individual interviews and focus groups), prolonged engagement with participants, member checking (85% response rate), peer debriefing with three experienced qualitative researchers, and maintaining an audit trail of all analytical decisions.

The study received ethical approval from the Ghana Education Service (Approval No. GES/REC/2024/037) and the respective colleges. Participants provided written informed consent after receiving detailed information about the study's purpose, procedures, and their rights. Confidentiality was maintained throughout the research process using coded identifiers (e.g., Participant A7, Participant S4), secure data storage, and restricted access to raw data. Participants were informed of their right to withdraw at any time without penalty.

4. Results

The analysis revealed four major themes regarding how pre-service teachers balance entrepreneurial traits with teacher education: (1) Understanding and Valuing Entrepreneurial Traits, (2) Challenges in Integration, (3) Institutional Support and Barriers, and (4) Strategies for Balance (refer to table 3).

4.1 Theme 1: Understanding and Valuing Entrepreneurial Traits

Participants demonstrated varying levels of understanding regarding entrepreneurial traits in education. Most (89%, n=40) recognized creativity, innovation, and problem-solving as key entrepreneurial characteristics relevant to teaching.

"As a teacher, you need to be creative because every child is different. You cannot use the same method for all children. You need to innovate and find new ways to reach them." (Participant A7, Accra College)



Many participants (84%, n=38) valued entrepreneurial traits as essential for effective teaching in contemporary classrooms. They recognized that traditional teaching methods might not be sufficient for addressing diverse learning needs.

"The world is changing, and education must change too. We cannot continue teaching the same way our teachers taught us. We need to be entrepreneurs in our classrooms." (Participant S4, St. Louis College)

However, some participants (40%, n=18) struggled to articulate how entrepreneurial traits specifically relate to teaching, suggesting gaps in their conceptual understanding. This was particularly evident among participants from St. Louis College, where 55% expressed uncertainty compared to 28% at Accra College.

4.2 Theme 2: Challenges in Integration

Participants identified several challenges in balancing entrepreneurial traits with traditional teacher education requirements. The most prominent challenge was the perceived tension between innovation and standardized curricula, mentioned by 67% (n=30) of participants.

"Sometimes you want to try something new, but the curriculum is very strict. You have to cover certain topics in a certain way, and there's no room for creativity." (Participant A12, Accra College)

Time constraints and heavy course loads were also significant barriers, cited by 73% (n=33) of participants. Participants felt overwhelmed by academic requirements, leaving little opportunity to develop entrepreneurial skills.

"We have so many courses and assignments. When do we have time to think about being entrepreneurial? We're just trying to survive the program." (Participant S8, St. Louis College)

Resource limitations affected 56% (n=25) of participants, with both colleges facing constraints that limited opportunities for entrepreneurial activities. Participants noted the need for better facilities, materials, and funding to support innovative projects.

Fear of failure and risk aversion emerged as psychological barriers affecting 49% (n=22) of participants. Many expressed concerns about implementing innovative approaches without adequate support or preparation.

"Fear is a big challenge. What if the new method doesn't work? What if the students don't understand? What if the supervisor thinks I'm not following the curriculum properly? It's safer to stick to what everyone knows works." (Participant S18, St. Louis College)

4.3 Theme 3: Institutional Support and Barriers

The level of institutional support for entrepreneurial development varied significantly between the two colleges. Participants from Accra College (76%, n=19 of 25) reported more opportunities for entrepreneurial activities, including student-led initiatives, innovation clubs, and supportive faculty mentorship.

"Our college encourages us to start our own projects. I started a tutoring service for primary school children, and the lecturers supported me. They even helped me connect with resources in the community." (Participant A18, Accra College)

In contrast, participants from St. Louis College (80%, n=16 of 20) reported more traditional approaches to teacher education with limited emphasis on entrepreneurial development.

"The focus here is on traditional teaching methods. We don't really discuss entrepreneurship or innovation much. Everything is about following the syllabus and passing exams." (Participant S15, St. Louis College)

Despite these differences, both colleges faced resource constraints that limited opportunities for entrepreneurial activities. Overall, 62% (n=28) of all participants noted the need for better facilities, technology access, and funding to support innovative projects. This suggests that even institutions with supportive cultures face structural limitations.

4.4 Theme 4: Strategies for Balance

Despite challenges, participants developed various strategies for balancing entrepreneurial traits with teacher education requirements. The most common strategy, employed by 60% (n=27) of participants, involved integrating entrepreneurial thinking into existing assignments rather than treating it as separate.



"I try to add creative elements to all my lesson plans. Even though the curriculum is fixed, I can still be creative in how I teach the content. For example, I use storytelling and games to teach mathematics concepts." (Participant A22, Accra College)

Peer collaboration emerged as another significant strategy, with 51% (n=23) of participants forming informal networks to share innovative ideas and support each other's entrepreneurial efforts. These peer groups operated largely outside formal institutional structures.

"We have a WhatsApp group where we share creative teaching ideas. Sometimes we meet on weekends to plan innovative lessons together. The college doesn't organize this—we do it ourselves." (Participant S19, St. Louis College)

Faculty mentorship, though less common (33%, n=15), proved valuable for those who accessed it. Participants who found progressive faculty members reported greater confidence in implementing innovative approaches.

"Some lecturers really encourage innovation. Dr. Mensah always pushes us to think differently and guides us in developing new projects. Having that support makes a huge difference." (Participant A6, Accra College)

Extracurricular engagement in innovation clubs, entrepreneurship competitions, and community projects was reported by 42% (n=19) of participants, primarily from Accra College where such opportunities were more readily available.

5. Discussion

5.1 Interpretation of Findings

The findings reveal a complex relationship between entrepreneurial traits and teacher education in the Ghanaian context. While pre-service teachers recognize the value of entrepreneurial characteristics, they face significant challenges in integrating these traits with traditional teacher preparation approaches. This tension reflects broader debates about the purpose and structure of teacher education in rapidly changing educational landscapes.

The high percentage of participants (89%) who recognize the importance of entrepreneurial traits confirms findings from Miller et al. [13], who reported similar awareness levels among American pre-service teachers. However, the Ghanaian context adds unique dimensions to this understanding, particularly regarding how resource constraints and institutional cultures shape entrepreneurial development.

The variation in institutional support between the two colleges suggests that leadership and institutional culture play crucial roles in fostering entrepreneurial development. Accra College's more supportive environment, characterized by innovation clubs, mentorship programs, and encouragement of student-led initiatives, aligns with research by Chen and Li [6], who found that institutional culture significantly influences entrepreneurial behaviour among education students. Their study demonstrated that institutions with supportive cultures produced graduates with 41% higher entrepreneurial self-efficacy scores.

The tension between innovation and standardization identified by 67% of participants reflects broader debates in teacher education literature. This finding is consistent with research by Zhao [12], who argued that rigid curriculum structures can inhibit creative teaching approaches. However, our findings extend this understanding by revealing specific mechanisms through which this tension operates—including time pressures, assessment requirements, and fear of deviating from prescribed approaches. This contrasts somewhat with Thompson and Davis's [14] findings in the UK, where the tension manifested more in conflicts between teacher educators' priorities rather than in curriculum structure itself.

5.2 Comparison with Existing Research

The challenges identified in this study both confirm and extend findings from similar research in other African contexts. Mwangi and Ochieng [15] found similar tensions between entrepreneurial aspirations and institutional constraints among Kenyan pre-service teachers, reporting that only 18% had formal entrepreneurship training. Our study reveals comparable patterns (23% in Ghana), but provides more nuanced insights about how students navigate these challenges through informal peer networks and creative integration strategies.

Interestingly, the strategies developed by participants in this study differ markedly from those reported in Western contexts. While Miller et al. [13] found that American pre-service teachers benefited primarily from formal entrepreneurship modules embedded in curricula, Ghanaian participants relied more



heavily on informal approaches, peer collaboration, and individual initiative. This suggests that entrepreneurial development in resource-constrained contexts may follow different pathways than in well-resourced environments—a finding with important implications for policy and practice in developing nations.

The institutional differences observed between Accra College and St. Louis College contrast with findings by Thompson and Davis [14], who reported more uniform approaches across teacher education institutions in the UK. This suggests that institutional autonomy in Ghana may create more variation in entrepreneurial education approaches, potentially both a strength (allowing innovation) and weakness (creating inconsistency). Our findings indicate that this variation relates strongly to institutional leadership philosophy and historical mission, with Accra College's longer tradition of educational innovation creating a more entrepreneurially-oriented culture.

The psychological barriers identified—particularly fear of failure affecting 49% of participants—confirm research by Newman et al. [26] on entrepreneurial self-efficacy. However, our study reveals that in teacher education contexts, this fear is compounded by concerns about student learning outcomes, supervisor evaluations, and certification requirements. This multilayered fear response has not been adequately addressed in previous literature and represents an important contribution to understanding barriers to innovation in teacher preparation.

Notably, the findings challenge some assumptions in the literature. While Nabi et al.'s [8] systematic review suggested that entrepreneurship education consistently improves entrepreneurial intentions and skills, our participants demonstrated high entrepreneurial awareness despite minimal formal training. This suggests that entrepreneurial mind-sets may develop through multiple pathways, including observation of educational challenges, personal experiences with resource constraints, and cultural values emphasizing initiative and creativity.

5.3 Implications for Practice

The findings have several important implications for teacher education practice in Ghana and similar developing contexts:

Curriculum Integration: Teacher education programs should systematically integrate entrepreneurial concepts throughout the curriculum rather than treating them as separate add-on components. This integration should be explicit, intentional, and assessed, with entrepreneurial competencies embedded in course learning outcomes. Based on participant experiences, successful integration might involve redesigning existing assignments to include innovation requirements, incorporating case studies of teacher-preneurs, and creating opportunities for practical entrepreneurial projects linked to pedagogical content.

Faculty Development: Teacher educators need professional development to effectively model and teach entrepreneurial traits. Our findings suggest that many faculty members themselves may lack entrepreneurial orientation, particularly in more traditional institutions like St. Louis College. Professional development programs should address both conceptual understanding (what entrepreneurship means in educational contexts) and practical skills (how to foster entrepreneurial thinking while maintaining pedagogical rigor). This could involve exchange programs, workshops with successful teacher-preneurs, and communities of practice focused on innovative pedagogy.

Institutional Culture: Colleges should foster cultures that encourage innovation and risk-taking while maintaining academic rigor. This requires deliberate leadership actions, including celebrating innovative teaching practices, creating safe spaces for experimentation, providing resources for student-led initiatives, and revising assessment systems to reward creativity alongside content mastery. The success of Accra College's innovation club suggests that relatively low-cost initiatives can significantly impact institutional culture.

Resource Allocation: Institutions should allocate resources to support entrepreneurial activities and student-led initiatives. While resource constraints are real, our findings suggest that entrepreneurial development need not be expensive—peer collaboration networks, mentorship programs, and creative use of existing resources can all support development. However, some strategic investments in innovation spaces, seed funding for student projects, and technology access would significantly enhance opportunities.

Assessment Reform: Current assessment practices that emphasize standardization and compliance may inadvertently discourage entrepreneurial risk-taking. Teacher education programs should develop assessment approaches that value innovation, creative problem-solving, and adaptive teaching while still ensuring pedagogical competence. This might include portfolio-based assessments showcasing innovative

practices, self-reflection on risk-taking experiences, and evaluation of entrepreneurial projects alongside traditional teaching demonstrations.

Policy Integration: Education policymakers should ensure alignment between national frameworks emphasizing innovation and the actual experiences of pre-service teachers. The disconnect between the National Teacher Education Curriculum Framework's emphasis on 21st-century skills and participants' reports of rigid, standardized training suggests implementation gaps that require attention.

5.4 Limitations

This study has several limitations that should be considered when interpreting findings. First, the focus on two institutions limits generalizability to other Ghanaian colleges of education, particularly those in rural areas or with different resource levels. The selection of two relatively well-established, urban institutions may not represent the experiences of pre-service teachers in less-resourced contexts.

Second, the study's cross-sectional design provides a snapshot of participants' experiences without capturing developmental changes over time. A longitudinal approach tracking the same participants from program entry through graduation and into early teaching careers would provide richer insights into how entrepreneurial traits develop and manifest in practice.

Third, the phenomenological approach, while providing rich insights into lived experiences, may not fully capture the institutional, policy, and systemic factors influencing entrepreneurial development. Future research could benefit from mixed methods approaches that include quantitative measures of entrepreneurial traits, institutional support, and teaching outcomes, complemented by institutional ethnography examining organizational cultures and structures.

Fourth, the study relied on self-reported data, which may be subject to social desirability bias. Participants may have over-reported their entrepreneurial activities or understanding to present themselves favorably. Observational studies of actual teaching practices would provide more objective data on how entrepreneurial traits manifest in classroom settings.

Fifth, the sample, while diverse in some respects, was limited to final-year students. Including faculty perspectives, administrator views, and early-career teacher experiences would provide a more comprehensive understanding of entrepreneurial trait development across the teacher preparation continuum.

Finally, the study did not examine how entrepreneurial traits actually translate into teaching effectiveness or student outcomes. Future research should investigate whether teachers with stronger entrepreneurial characteristics produce better learning outcomes, higher student engagement, or more innovative classroom environments.

6. Conclusion

This phenomenological study provides valuable insights into how pre-service teachers in Ghana balance entrepreneurial traits with teacher education requirements. The findings reveal both significant opportunities and substantial challenges for integrating entrepreneurial mindsets into teacher preparation programs.

The research makes several important contributions to the limited literature on entrepreneurial education in African teacher preparation contexts. First, it demonstrates that while pre-service teachers clearly value entrepreneurial traits and recognize their relevance to contemporary teaching, awareness alone is insufficient without systematic institutional support and curriculum integration. Second, it reveals significant institutional variation in entrepreneurial development approaches, with implications for understanding how organizational culture shapes teacher preparation outcomes. Third, it identifies specific barriers—including curriculum rigidity, time constraints, resource limitations, and fear of failure—that must be addressed for effective integration of entrepreneurial education. Fourth, it documents creative strategies that pre-service teachers develop to balance innovation with traditional requirements, highlighting their agency and resilience despite systemic constraints.

The study's phenomenological approach has illuminated the lived experiences of pre-service teachers in ways that quantitative studies alone could not achieve. Participants' voices reveal the emotional and psychological dimensions of navigating tension between innovation and tradition, the importance of peer support networks, and the impact of institutional culture on professional identity development. These insights enrich our understanding of teacher preparation as not merely a technical process of skill acquisition but a complex journey of identity formation that shapes how future educators will approach their work.



Several key findings warrant emphasis. The 89% recognition rate of entrepreneurial trait importance, combined with the 67% who identified curriculum rigidity as a major barrier, suggests a troubling disconnect between what pre-service teachers believe they need and what their programs provide. The stark differences between Accra College and St. Louis College—with 76% of Accra participants reporting supportive environments compared to only 20% at St. Louis—demonstrate that institutional culture may be more influential than national policies or curriculum frameworks in shaping entrepreneurial development.

The informal strategies participants developed—peer collaboration networks, creative integration of innovation into required assignments, and seeking progressive mentors—reveal both resourcefulness and a systemic failure to formally support entrepreneurial development. That 51% of participants relied on informal peer networks suggests that colleges are missing opportunities to formalize and enhance these naturally occurring support structures.

The study has important implications for policy and practice in Ghanaian teacher education and potentially for other developing nations facing similar challenges. As Ghana continues to reform its education system through initiatives like the National Teacher Education Curriculum Framework, integrating entrepreneurial traits into teacher preparation could contribute significantly to developing more innovative and adaptive educators capable of addressing 21st-century educational challenges. However, this integration must go beyond policy rhetoric to include substantive changes in curriculum design, faculty development, institutional culture, resource allocation, and assessment practices.

For policymakers, the findings suggest several priorities: ensuring alignment between national frameworks and institutional practices, providing resources specifically designated for innovation support, creating incentives for institutions to develop entrepreneurial cultures, and establishing mechanisms to share best practices across colleges. The success of Accra College's approach offers a potential model that could be adapted and scaled.

For teacher education institutions, the research highlights the importance of creating supportive environments where risk-taking is encouraged, innovation is celebrated, and failure is treated as a learning opportunity. This requires intentional leadership, faculty buy-in, appropriate resources, and systematic integration of entrepreneurial concepts throughout programs rather than treating them as peripheral additions.

For teacher educators, the study emphasizes the need for modeling entrepreneurial traits in their own practice, providing mentorship for innovative student projects, redesigning assignments to encourage creativity, and creating safe spaces for experimentation. The 33% of participants who benefited from faculty mentorship reported significantly higher confidence in implementing innovative approaches, suggesting that individual faculty members can make substantial differences even within less supportive institutional cultures.

Future research should pursue several directions to build on these findings. Longitudinal studies tracking pre-service teachers from program entry through graduation and into early teaching careers would illuminate how entrepreneurial traits develop over time and how they manifest in actual classroom practice. Mixed-methods research combining quantitative measures of entrepreneurial characteristics with qualitative exploration of experiences would provide more comprehensive understanding. Comparative studies across different regions of Ghana and other African nations could reveal how cultural, economic, and educational contexts shape entrepreneurial development. Investigation of the relationship between teachers' entrepreneurial traits and actual student outcomes would address the crucial question of whether entrepreneurial teaching translates into better learning results.

Additionally, research examining successful models of entrepreneurial teacher education from around the world and their potential adaptability to African contexts would be valuable. Studies exploring how digital technologies and online learning platforms might support entrepreneurial development in resource-constrained environments could reveal new possibilities. Finally, investigation of policy implementation processes—examining why national frameworks emphasizing innovation do not consistently translate into changed practices—would inform more effective reform strategies.

In conclusion, this study demonstrates that Ghanaian pre-service teachers possess both the awareness and aspiration to develop entrepreneurial traits, but they require enhanced support systems, reformed curricula, and transformed institutional cultures to fully realize this potential. The path forward requires collective action from policymakers, institutional leaders, teacher educators, and pre-service teachers themselves. By working together to address identified barriers and build on emerging strengths, Ghana's teacher education system can better prepare educators who are not only pedagogically sound but



also entrepreneurially minded—ready to innovate, adapt, and lead in the dynamic educational landscape of the 21st century.

The transformation of teacher education to embrace entrepreneurial mind-sets is not merely an academic exercise but a practical necessity for addressing Ghana's educational challenges. As the nation strives to provide quality education for all children despite resource constraints, large class sizes, and diverse learning needs, teachers with entrepreneurial characteristics will be essential. These educators will not wait for perfect conditions or complete resources but will creatively work with what they have, identify opportunities within constraints, take calculated risks to improve learning, and inspire students to become innovative thinkers themselves. Preparing such teachers is an investment in Ghana's educational future and ultimately in the nation's development.

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