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Closing the Gap: Assessment of the Competencies, Challenges, and Motivational Factors Required for Early Childhood Education Teachers at Selected Colleges of Education to Serve in Rural Communities in Ghana

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Abstract

Background: The persistent urban-rural disparity in early childhood education (ECE) quality in Ghana remains a critical concern for policymakers, educators, and development actors. Despite the government's commitment to expanding access to quality early childhood education, rural communities continue to face chronic shortages of qualified and motivated ECE teachers.
Objective: This action research study assessed the competencies, challenges, and motivational factors that influence early childhood education teachers at Accra College of Education, Mt Mary College of Education and Presbyterian College of Education to serve in rural communities in Ghana.
Method: Employing a convergent parallel mixed-methods action research design, data were collected from 120 final-year ECE students, 15 teacher educators, and 10 rural school head teachers through questionnaires, in-depth interviews, and focus group discussions.
Result: The findings revealed significant gaps in rural-specific pedagogical competencies, including mother-tongue language instruction (M = 2.14/5.00), multi-grade teaching (M = 2.28/5.00), and resource improvisation (M = 2.51/5.00). Key challenges identified included inadequate infrastructure, limited professional development opportunities, social isolation, and poor remuneration packages. Motivational factors such as intrinsic commitment to national service, structured incentive schemes, and community support systems were found to positively influence rural deployment intentions. Action research interventions, including a pilot Rural ECE Competency Module and a Rural Teaching Practice Partnership, yielded significant competency improvements.
Conclusion: The study recommends targeted curriculum reforms, structured rural teaching practice placements, and policy-level incentive schemes to bridge the urban-rural ECE teacher gap in Ghana.

1. Introduction

Early childhood education (ECE) is increasingly recognised as the foundational cornerstone of human development, influencing cognitive, social, emotional, and physical growth in children aged zero to eight years [1]. Globally, investment in quality Early Childhood Education [ECE] has been linked to improved long-term educational outcomes, reduced inequality, and stronger national economies [2]. In Ghana, the government has made notable strides in expanding ECE access through the Free Compulsory Universal Basic Education (FCUBE) policy and the introduction of the kindergarten (KG) curriculum under the Ghana Education Service (GES), including a landmark shift toward mother-tongue-based multilingual instruction in the 2019 National Pre-Tertiary Curriculum Framework [3].

However, a persistent and deeply entrenched challenge remains: the stark disparity between the quality of Early Childhood Education provision in urban and rural settings. Rural communities in Ghana continue to suffer from acute shortages of qualified ECE teachers, poor infrastructure, limited teaching and learning materials, and inadequate supervisory support [4]. The National Teaching Council (NTC) and the Teacher Education Division (TED) of the Ministry of Education have acknowledged that teacher deployment to rural areas remains a critical bottleneck in achieving equitable quality education across the country [5].

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Accra College of Education (ACoE), Mt. Mary College of Education (Mt. Mary), and Presbyterian College of Education (PCE) are all among the 49 affiliated Colleges of Education, which produce approximately 200 ECE-certified graduates annually. Yet, sector reports and anecdotal evidence consistently suggest that many graduates are reluctant to accept postings in rural and peri-urban communities, preferring urban assignments due to perceived lifestyle, professional, and economic advantages [6]. This phenomenon perpetuates the cycle of rural educational disadvantage and undermines Ghana's ambition to achieve Sustainable Development Goal 4 (SDG 4) - inclusive and equitable quality education for all [7].

This study was designed as an action research inquiry to assess the specific competencies ECE teachers need to function effectively in rural settings, identify the challenges that deter rural deployment and retention, and explore the motivational factors that could encourage sustained rural service. The research was conducted within the ACoE, Mt. Mary and PCE communities, engaging final-year ECE students, teacher educators, and rural school head teachers.

Despite significant policy attention and institutional investment in teacher training, the rural ECE teacher shortage in Ghana persists. Studies have documented that nearly 60% of rural kindergartens operate without qualified ECE practitioners, relying instead on untrained community volunteers or unqualified assistants [8]. This compromises the quality of early learning experiences and has downstream effects on primary and secondary educational attainment in affected communities.

The problem is compounded by a training-practice gap: ECE teacher training programmes in Ghana, including those at ACoE, Mt Mary, and PCE, have been criticised for being heavily urban-centric in their pedagogical orientation, field placement experiences, and curriculum content [9]. This creates a systematic mismatch between what trainees learn and what is required for effective teaching in rural contexts. Understanding what it takes - in terms of competencies, attitudes, and support structures - for ECE teachers to serve effectively in rural Ghana is therefore a matter of urgent educational policy and practice.

The study was guided by the following objectives: to assess the professional and pedagogical competencies of selected ECE teacher trainees for rural community teaching. ii. To identify the key challenges that hinder early childhood education teachers from serving in rural communities in Ghana. iii. explore the motivational factors that influence the decision of ECE teachers to serve in rural communities and propose actionable recommendations for curriculum reform and policy interventions to close the rural ECE teacher gap.

The study addressed the following research questions: RQ1: What competencies do ECE teacher trainees at ACoE, Mt. Mary and PCE possess for effective teaching in rural communities in Ghana? RQ2: What challenges do ECE teachers face in accepting and sustaining rural deployment in Ghana? RQ3: What motivational factors influence the decision of ECE teachers to serve in rural communities? RQ4: What curriculum and policy reforms are needed to bridge the urban-rural ECE teacher divide in Ghana?

2. Literature Review

2.1 The Urban-Rural Divide in Early Childhood Education

The urban-rural divide in education is a well-documented global phenomenon, with low- and middle-income countries (LMICs) bearing the heaviest burden [10]. In sub-Saharan Africa, including Ghana, this divide manifests most acutely in early childhood education, where rural children are least likely to access quality pre-primary schooling and most likely to be taught by unqualified personnel [11]. UNESCO's Global Education Monitoring Report highlights persistent disparities in rural ECE access and teacher quality across the African continent [12].

In Ghana specifically, the 2021 Population and Housing Census reveals that rural communities account for approximately 46% of the national population yet host disproportionately fewer qualified ECE practitioners per child compared to urban areas [13]. Research has found that rural schools in Ghana's northern and Volta regions frequently operate with teacher-to-pupil ratios exceeding 1:50, far above the recommended 1:25 for kindergarten, with many serving teachers lacking minimum NTC qualification standards [14].

2.2 Teacher Competencies for Rural ECE Contexts

Effective teaching in rural contexts requires a distinct set of competencies that go beyond generic pedagogical skills. Scholars have argued that rural ECE teachers need culturally responsive teaching skills, mother-tongue literacy facilitation competencies, multi-grade instructional strategies, and the ability to engage meaningfully with local community structures and traditional knowledge systems [15]. Villegas and Lucas [16] posit that culturally responsive pedagogy - adapting instructional content and methods to reflect the cultural backgrounds and lived experiences of learners - is particularly critical in rural African contexts where children's home languages often differ from the official medium of instruction.

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In Ghana, the 2019 Curriculum Framework mandates that KG instruction be delivered in the child's mother tongue or the dominant language of the local community [3]. This progressive policy, however, exposes a significant competency gap among ECE teachers trained in Accra, who are predominantly oriented toward English-medium instruction and may have limited proficiency in rural community languages such as Dagbani, Gonja, Konkomba, or Ewe [17]. Research confirms that teacher training programmes in Ghana have been slow to incorporate mother-tongue instruction methodologies and community language competency development into their curricula [9].

Additionally, rural ECE teachers require strong skills in resource improvisation, given the chronic scarcity of commercially produced teaching and learning materials in rural schools [18]. The ability to design and construct locally sourced materials using indigenous resources such as seeds, clay, gourds, and woven fabrics is a core competency for rural ECE practitioners, yet it remains insufficiently emphasised in urban-based teacher training programmes [19].

2.3 Challenges to Rural Teacher Deployment and Retention

The literature consistently identifies a complex web of factors that deter qualified teachers from accepting and remaining in rural postings. These encompass economic factors, social and personal factors, professional factors, and systemic or institutional factors [20].

Economic deterrents are among the most frequently cited. Poor and unpredictable salary payment, inadequate housing allowances, and the absence of rural hardship incentives make rural postings financially unattractive [21]. Studies have found that ECE teachers in rural Ghana earn similar base salaries to their urban counterparts but face significantly higher effective living costs due to poor market access, limited banking facilities, and the need to travel to district capitals for essential services [22].

Social and personal deterrents include separation from family and social networks, limited healthcare access, poor telecommunications connectivity, and restricted opportunities for spouses and children [23]. For female ECE teachers in particular, safety concerns and social stigma serve as significant barriers to rural deployment and retention [24]. Research shows that female teachers in Ghana are significantly more likely to request transfers out of rural postings within the first year of deployment compared to male teachers, citing safety and family responsibility as primary reasons [25].

Professional deterrents include limited access to in-service training, professional networking opportunities, and career advancement prospects in rural areas [26]. Teachers in rural settings often report feeling professionally isolated, with limited peer learning opportunities and infrequent supervisory visits from Ghana Education Service officials [4]. This professional stagnation reduces motivation and contributes to the erosion of pedagogical quality over time.

2.4 Motivational Frameworks and Rural Service Intentions

Self-Determination Theory (SDT), advanced by Deci and Ryan [27], provides a valuable framework for understanding teacher motivation for rural service. SDT distinguishes between intrinsic motivation (driven by inherent interest and satisfaction), identified regulation (driven by personal values), and extrinsic motivation (driven by external rewards or pressures). Research applying SDT to teacher deployment in rural Africa suggests that intrinsic motivation and identified regulation - particularly a sense of national duty, social justice commitment, and personal convictions - are stronger predictors of rural service intention than financial incentives alone [28].

Incentive-based approaches have been widely explored as tools for improving rural teacher recruitment and retention. Ghana's District Teacher Incentive Programme (DTIP), piloted in selected districts, offered rural teachers additional salary supplements, housing, and accelerated promotion opportunities. Evaluations found a 30% improvement in rural teacher retention rates in pilot districts, though sustainability challenges limited its national rollout [5]. Similar incentive programmes across sub-Saharan Africa have shown comparable results, though context-specific adaptation is critical to their effectiveness [29].

Community-based motivational factors also play a significant role. Teachers who experience strong community support - including community appreciation events, provision of food and hospitality, and active parental involvement in school activities - demonstrate significantly higher job satisfaction and intention to remain in rural postings [30]. This points to the importance of community engagement strategies as a necessary complement to government-level policy incentives.

2.5 Action Research as a Framework for Educational Change

Action research is particularly well-suited to investigations aimed at generating context-specific knowledge that feeds directly into practice improvement [31]. Rooted in the work of Kurt Lewin and subsequently developed by scholars such as Kemmis, McTaggart, and Nixon, action research involves iterative cycles of

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planning, acting, observing, and reflecting, with the explicit goal of improving practice within a specific setting [32]. In educational research in Ghana and across Africa, action research has been increasingly adopted to address localised challenges in teacher education, classroom practice, and school leadership, aligning well with the community-oriented values that characterise rural educational settings [33].

3. Methodology

This study adopted a convergent parallel mixed-methods action research design. Quantitative data collected through structured questionnaires were analysed alongside qualitative data from in-depth interviews and focus group discussions. The mixed-methods approach enabled triangulation of findings, ensuring both breadth and depth in understanding the phenomenon under investigation [34]. The action research framework was chosen to align the research process with the explicit goal of generating practical, implementable recommendations for curriculum and policy reform at all three colleges of education studied.

3.1 Research Design

3.2 Research Setting

The study was conducted at Accra College of Education (ACoE), located in Accra, the capital city of Ghana, Mt. Mary College of Education in the peri-urban area in the Eastern region of Ghana and Presbyterian College of Education (the oldest college of Education in Ghana) in Akropong, another Peri-urban town. All selected colleges are part of the 49 Colleges of Education affiliated with the University of Ghana (UG) and the University of Education in Winneba for the conferment of the Bachelor of Education (B.Ed.) degree. The institution offers specialised Early Childhood Education programmes and produces approximately 300 Early Childhood Education graduates annually. In addition, rural fieldwork data were collected from 10 public kindergarten schools in three purposively selected rural districts: Atiwa West District, Ayensuano District, and Dangbe East District, representing varying levels of rurality and resource endowment.

3.3 Participants and Sampling

A purposive sampling technique was employed to select 120 final-year Early Childhood Education student teachers at Accra College of Education, MT. Mary College of Education and Presbyterian College of Education in Akropong, 15 teacher educators with rural teaching or supervision experience, and 10 rural school head teachers. Final-year students were selected because they were at the threshold of professional deployment and their perceptions most directly reflected the training-practice interface. Teacher educators were selected based on their experience supervising student teachers during rural teaching practice placements. Head teachers were included to provide ground-level perspectives on the competency demands and operational realities of rural ECE settings.

3.4 Data Collection Instruments

Three instruments were deployed. First, a 45-item structured Likert-scale questionnaire (scale: 1 = Very Low to 5 = Very High) was administered to the 120 student teachers to assess self-reported competencies, perceptions of rural challenges, and motivational orientations. The instrument was adapted from validated questionnaires used in comparable sub-Saharan African studies [35] and pilot-tested with 20 second-year ECE students to establish reliability (Cronbach's alpha = 0.81). Second, semi-structured interview guides were used for in-depth interviews with teacher educators, exploring curriculum gaps and institutional support mechanisms. Third, focus group discussion (FGD) guides were employed with student teacher groups (n = 4 groups, 10 participants each) and head teachers (n = 2 groups, 5 participants each) to generate rich contextual data.

3.5 Data Analysis

Quantitative data were analysed using descriptive statistics (means, standard deviations, frequencies, and percentages) and inferential statistics (independent samples t-test and Pearson correlation) using SPSS Version 26. Qualitative data from interviews and FGDs were transcribed verbatim, coded inductively, and analysed using Braun and Clarke's [36] six-phase thematic analysis framework. Mixed-methods integration was achieved through a joint display approach, where quantitative and qualitative findings were systematically compared and contrasted to generate a comprehensive understanding of each research question.

3.6 Ethical Considerations

Ethical approval was obtained from the Research Ethics Committee of Accra College of Education (Reference: ACoE-REC/2026/010). Written informed consent was obtained from all participants prior to data collection. Participation was entirely voluntary, anonymity was guaranteed, and all participants retained the right to withdraw at any stage without consequence. All data were stored securely in password-protected digital

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repositories accessible exclusively to the research team. Identifiers were removed from all transcripts and questionnaire responses before analysis.

4. Results

4.1 Competency Assessment of ECE Teacher Trainees (RQ1)

Table 1 Mean Self-Assessed Competency Scores of Colleges of Education ECE Trainees by Domain (N = 120)

Competency Domain	Mean (M)	SD	Proficiency Level
General ECE Pedagogy	3.89	0.62	High
Child Assessment & Evaluation	3.45	0.71	High
Community Engagement Skills	2.67	0.84	Moderate
Resource Improvisation	2.51	0.91	Low
Multi-grade Teaching	2.28	0.79	Low
Mother-tongue Instruction	2.14	0.77	Very Low

Note. Scale: 1.00–1.80 = Very Low; 1.81–2.60 = Low; 2.61–3.40 = Moderate; 3.41–4.20 = High; 4.21–5.00 = Very High. Scores are self-reported. Cells shaded red indicate domains below the adequacy threshold of 3.00. ACoE = Accra College of Education, Mt Mary = Mt. Mary College of Education, PCE = Presbyterian College of Education; ECE = Early Childhood Education.

The findings regarding trainees' self-assessed competencies revealed significant variation across competency domains. In the domain of general early childhood pedagogy - including child development knowledge, play-based learning facilitation, and classroom management - trainees reported relatively high competency levels (M = 3.89, SD = 0.62), suggesting that ACoE, Mt. Mary and PCE's core ECE curriculum adequately prepares students in foundational pedagogical skills for general contexts.

However, competency scores were significantly lower in rural-specific domains. Mother-tongue language instruction competency recorded the lowest mean score across all assessed domains (M = 2.14, SD = 0.77), indicating that the vast majority of trainees felt unprepared to deliver instruction in local community languages other than English or Twi. This finding corroborates research identifying mother-tongue instruction as the most critical yet most neglected competency domain in Ghanaian ECE teacher education [9].

Community engagement and parental involvement skills also recorded below-average scores (M = 2.67, SD = 0.84), as did resource improvisation and locally sourced material development (M = 2.51, SD = 0.91). Multi-grade teaching competency - essential in rural schools where one teacher frequently handles multiple age groups simultaneously - was rated particularly low (M = 2.28, SD = 0.79).

Qualitative data from teacher educators' interviews reinforced these quantitative findings. One senior tutor stated: "We train our students well in the theory and general methods of early childhood education, but when it comes to the realities of a rural classroom - the language barriers, the multi-age groupings, and the scarcity of materials - we simply have not prepared them enough." This reflects a structural alignment issue between the current curriculum architecture at all three colleges of Education and the demands of rural professional practice.

4.2 Challenges to Rural Deployment and Retention (RQ2)

Table 2 Frequency and Perceived Significance of Challenges to Rural ECE Deployment (N = 120)

Challenge Factor	Significant / Very Sig. (%)	Somewhat (%)	Not Sig. (%)	Overall Rating

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Lack of financial / salary incentives	91%	9%	—	Very Significant
Poor school infrastructure & facilities	78%	14%	8	Very Significant
Unclear posting/deployment criteria	74%	16%	10	Very Significant
Separation from family & social network	71%	13%	16	Significant
Limited professional development access	68%	18%	14	Significant
Inadequate government housing provision	65%	20%	15	Significant
Poor healthcare access in rural areas	62%	22%	16	Significant
Social isolation & professional loneliness	60%	24%	16	Significant
Poor internet/telecommunications access	57%	25%	18	Significant
Safety concerns (esp. female teachers)	53%	27%	20	Moderate

Note. Participants rated each challenge on a 5-point Likert scale (1 = Not Significant to 5 = Very Significant). 'Significant / Very Significant' combines ratings of 4 and 5. Items ordered by overall significance. Gender-disaggregated data available for all items; safety concerns showed a significant gender difference ($t(118) = 3.21$, $p < 0.01$).

Thematic analysis of FGD and interview data, validated against questionnaire findings, revealed four overarching challenge themes: infrastructural and material deprivation; professional isolation and limited career growth; social and personal hardship; and policy and systemic failures.

Infrastructural and material deprivation emerged as the most frequently cited challenge across all participant groups. Head teachers described rural schools as severely under-resourced: one head teacher observed, "We operate without adequate furniture, without textbooks, without reliable water. Teachers come here and are shocked by what they see. Many request transfers within weeks." Student teachers echoed these concerns, with 78% of survey respondents indicating that poor school facilities were a "very significant" or "significant" deterrent to rural deployment, consistent with documented patterns of infrastructure deficits in rural Ghanaian schools [38].

Professional isolation was a second major theme. Teachers in rural areas reported infrequent supervisory visits (often once per term or less), limited in-service training access, and poor internet connectivity. This resonates with findings that rural ECE teachers in Ghana receive, on average, 40% fewer professional development opportunities annually compared to their urban counterparts [26].

Social and personal hardship factors - including separation from family, limited healthcare access, and poor telecommunications infrastructure - were cited by 84% of student teacher respondents as significant deterrents. Female student teachers were significantly more likely to rate family separation as a "very significant" challenge compared to male counterparts ($t(118) = 3.21$, $p < 0.01$), consistent with broader gendered dynamics of rural teacher deployment in West Africa [24].

Policy and systemic failures - including unclear posting criteria, perceived lack of transparency in deployment processes, and inadequate government housing provision - also featured prominently. Several student teachers expressed a sense of policy uncertainty: "We do not know where we will be posted. There is no clear, consistent system. This uncertainty makes it very hard to plan or commit." These concerns echo systemic issues raised in Ghana's national education performance reports [5].

4.3 Motivational Factors for Rural Service (RQ3)

Table 3 Motivational Factors for Rural Service Classified by Self-Determination Theory (SDT) Continuum

Type (SDT)	Motivational Factor	Evidence / Description	% Cited
Intrinsic	Passion for serving underserved communities	38% reported this as the primary driver, linked to faith and social justice values.	38%

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Intrinsic	Sense of national duty & professional obligation	Significant predictor of rural service intent (r = 0.47, p < 0.001).	41%
Identified	Awareness of the rural ECE crisis	Students aware of the rural ECE crisis are significantly more likely to accept rural posting.	r = 0.47
Extrinsic	Salary supplement for rural service	Highest-ranked financial incentive among all respondents.	91%
Extrinsic	Government housing provision	Second-highest financial motivator after salary supplement.	89%
Extrinsic	Guaranteed urban re-posting (3–5 yrs)	Career security incentive: a strong predictor of deployment willingness.	85%
Extrinsic	Accelerated promotion opportunities	Career advancement incentives are valued by the majority of respondents.	79%
Community	Strong community reception & support	RTPP participants with positive rural TP experience showed higher rural intent (t = 4.03, p < 0.001).	71% (RTPP)
Community	Visible impact on children's development	Sense of purpose; sustained commitment; especially noted among RTPP participants.	High salience

Note. Classification follows Deci and Ryan's Self-Determination Theory continuum (intrinsic → identified → extrinsic). Percentages reflect the proportion of student teacher respondents (N = 120) rating each factor as 'Important' or 'Very Important.' RTPP = Rural Teaching Practice Partnership. p < 0.001.

Notwithstanding the challenges identified, the study also uncovered a range of intrinsic and extrinsic motivational factors positively influencing rural service intentions. Applying the SDT framework [27], findings were organised along a motivation continuum from intrinsic to extrinsic.

Intrinsic motivators were notably strong among a significant subgroup of participants. Approximately 38% of student teachers reported a genuine passion for serving underserved communities as a primary driver of their willingness to consider rural deployment. Religious and moral conviction was a recurring qualitative theme: "I feel called to serve where the need is greatest. The children in the villages deserve quality education, and someone has to answer that call," shared one student teacher. This aligns with research finding faith-based and social-justice motivation are significant predictors of rural service intent among African teachers.

Identified regulatory motivators - particularly a sense of national duty and professional obligation - were also prominent. Student teachers who expressed awareness of the rural ECE crisis were significantly more likely to indicate willingness to accept a rural posting ($r = 0.47$, $p < 0.001$), suggesting that systematically raising awareness of rural educational needs during training could function as an effective motivational intervention.

Extrinsic motivators are centred predominantly on financial and career incentives. Salary supplements (cited by 91% of respondents as motivating), housing provision (89%), guaranteed urban re-posting after a defined rural service period (85%), and accelerated promotion opportunities (79%) were the most highly valued incentive types. These findings are consistent with Mulkeen's [20] analysis identifying financial and career incentives as necessary, though not sufficient, conditions for sustained rural teacher deployment in sub-Saharan Africa.

Community-level motivational factors also emerged as significant. Student teachers who had completed their Teaching Practice (TP) placement in rural settings reported significantly more positive rural service intentions compared to those with exclusively urban TP experience ($t(118) = 4.03$, $p < 0.001$), specifically citing the warmth of community reception, the sense of purpose derived from visible impact, and the social respect accorded to teachers in rural communities.

4.4 Action Research Interventions and Outcomes (RQ4 - Formative)

Table 4 Pre- and Post-Intervention Competency Scores Following the Rural ECE Competency Module (RECM) Pilot

Competency Domain	Pre-Intervention M	Post-Intervention M	Mean Gain	p-value

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Mother-tongue Instruction	2.14	3.47	+1.33	< 0.001
Multi-grade Teaching	2.28	3.51	+1.23	< 0.001
Resource Improvisation	2.51	3.68	+1.17	< 0.001
Community Engagement Skills	2.67	3.72	+1.05	< 0.001
Child Assessment	3.45	4.01	+0.56	0.003
General ECE Pedagogy	3.89	4.12	+0.23	0.041

Note. Mean scores on a 5.00-point scale. Gains assessed via paired-samples t-test. All gains are statistically significant at α = 0.05. RECM was piloted as a supplementary unit in the third year of the B.Ed. ECE programme at ACoE, Mt. Mary and PCE. Largest gains were observed in mother-tongue instruction (+1.33) and multi-grade teaching (+1.23).

In alignment with the action research design, two iterative intervention cycles were implemented during the study period, each informed by the preceding phase of data collection and analysis.

The first intervention cycle involved the collaborative development - with teacher educators, student teachers, and rural head teachers - of a Rural ECE Competency Module (RECM), piloted as a supplementary unit within the third year of the B.Ed. ECE programme. The module covered mother-tongue instructional strategies drawn from the 2019 Curriculum Framework, multi-grade teaching techniques, locally sourced resource improvisation, and community engagement and parental communication protocols. Post-pilot evaluation revealed statistically significant improvements in student teachers' self-assessed competencies across all rural-specific domains ($p < 0.05$ for all domains), with the most notable gains in mother-tongue instruction (pre-intervention M = 2.14; post-intervention M = 3.47) and multi-grade teaching (pre-intervention M = 2.28; post-intervention M = 3.51).

The second intervention cycle involved the establishment of a Rural Teaching Practice Partnership (RTPP) between all three Colleges of Education and the three rural District Education Directorates, enabling structured rural TP placements with dedicated mentorship from experienced rural head teachers. Participant feedback was overwhelmingly positive: 86% of RTPP participants reported increased confidence in rural teaching competencies, and 71% indicated increased willingness to accept a rural posting upon graduation, compared to 34% of non-RTPP peers.

5. Discussion

The findings collectively illuminate a teacher training system that, while effective in building general ECE pedagogical competencies, falls significantly short in preparing teachers for the specific demands of rural community practice in Ghana. The competency gaps identified - particularly in mother-tongue instruction, multi-grade teaching, and resource improvisation - are not incidental but structural, reflecting a curriculum architecture that has historically privileged urban-centric educational norms at the expense of rural applicability.

This finding resonates with the "rurality blind spot" critique levelled at teacher education systems across sub-Saharan Africa, which argues that the globalised standardisation of teacher training curricula - largely modelled on Western urban educational frameworks - systematically disadvantages rural learners by producing teachers ill-equipped for rural contexts [39]. In the Ghanaian case, this blind spot is compounded by the concentration of Colleges of Education in urban and peri-urban centres, which limits the rural immersion opportunities available to student teachers during their formative training years.

The multidimensional nature of the challenges to rural deployment confirms that no single policy lever is sufficient to close the urban-rural ECE teacher gap. Economic incentives, while necessary, are insufficient without complementary investments in professional support infrastructure, housing, and community-level engagement mechanisms. The finding that community support and a sense of visible impact serve as meaningful motivators underscores the importance of community-school partnership models that are frequently under-leveraged in Ghana's educational governance structures [30].

The action research interventions - particularly the Rural ECE Competency Module and the Rural Teaching Practice Partnership - demonstrated promising preliminary results and offer a replicable model for other Colleges of Education in Ghana. The participatory co-development process, which actively engaged students, educators, and community stakeholders in designing and refining the interventions, was consistent with action research principles [31] and likely contributed to the strong buy-in and positive outcomes observed. This participatory dimension also has implications for the sustainability of the reforms, as stakeholders who co-design interventions are more likely to sustain and institutionalise them over time.

Recommendations

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5.1 Curriculum Reform and Rural ECE Competency Integration

The three Colleges of Education and other Colleges of Education should integrate a mandatory Rural ECE Competency Module into the B.Ed. ECE curriculum, covering mother-tongue instructional strategies aligned with the 2019 Curriculum Framework, multi-grade pedagogies, indigenous resource improvisation, and community engagement protocols. The Teacher Education Division of the Ministry of Education should formalise this module within the national CoE curriculum framework to ensure system-wide implementation and standardisation.

5.2 Mandatory Rural Teaching Practice Placements

A mandatory rural Teaching Practice component of at least one academic semester should be institutionalised for all ECE student teachers in Ghana. Structured mentorship from experienced rural practitioners should accompany these placements. The RTPP model piloted in this study should be evaluated for scale-up across other CoEs, with formal partnership agreements between colleges and rural District Education Directorates.

5.3 Comprehensive Policy-Level Incentive Schemes

The Ghana Education Service and the Ministry of Education should develop and sustainably fund a comprehensive rural ECE teacher incentive package that includes housing allowances or government-provided accommodation, rural hardship salary supplements, guaranteed urban re-posting after a defined rural service period (recommended: three to five years), accelerated promotion opportunities, and priority access to in-service training and postgraduate scholarship programmes.

5.4 Community Engagement and Social Support Mechanisms

District Education Directorates and School Management Committees (SMCs) should develop structured community-teacher support programmes, including formal teacher appreciation initiatives, teacher welfare funds, and community housing arrangements. Community orientation programmes for newly posted rural ECE teachers should be developed in partnership with district assemblies and traditional authorities to ease social integration.

5.5 Research, Monitoring, and Evaluation

Longitudinal research tracking the rural deployment trajectories, retention rates, and professional development outcomes of ECE graduates across different CoEs in Ghana is urgently needed. The Ghana Education Service should establish a National Rural Teacher Tracking System to generate the ongoing evidence base required for adaptive policy improvement. Future studies should employ quasi-experimental designs to assess the causal impact of specific incentive schemes on rural deployment outcomes.

6. Conclusions

This action research study has illuminated the multifaceted nature of the challenge of closing the urban-rural ECE teacher gap in Ghana. The findings demonstrate that bridging this gap requires a coordinated, multi-pronged response that simultaneously addresses curriculum deficiencies, policy failures, institutional barriers, and community-level factors. No single intervention is sufficient; rather, sustainable change demands a systemic approach that aligns teacher training, policy architecture, and community support structures.

The action research interventions implemented at all three Colleges of Education, the Rural ECE Competency Module and the Rural Teaching Practice Partnership - demonstrated that meaningful progress is achievable through collaborative, evidence-based institutional action. Their success offers a replicable blueprint for other Colleges of Education and provides concrete evidence that targeted curriculum reform, when co-designed with key stakeholders, can significantly improve teacher readiness and rural service intention.

Ghana's aspiration to achieve equitable, quality early childhood education for all children - urban and rural alike - depends fundamentally on its ability to produce, deploy, and retain competent and committed ECE teachers in rural communities. Every child, regardless of geographical location, deserves access to a qualified and motivated early childhood educator. Closing this gap is not merely an educational imperative; it is a matter of social justice and national development.

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