

REVIEW ARTICLE

The dual mandate as a catalyst for strengthening geography education research and innovation in nigerian colleges of education

Abdulkadir Bello^{1,*}, Kamaluddeen Abubakar Baba¹, Jafar Mu'Azu¹, Ahmad Sa'Id Abubakar², Nura Isyaku Bello³, Surajo Aliyu⁴

¹Geography Department, Kano State College of Education And Preliminary Studies, 700211 Nigeria

²Geography Department, Aminu Kano College of Legal And Islamic Studies, Kano, 700341 Nigeria

³Geography Department, Aliko Dangote University of Technology, Wudil, 713281 Nigeria

⁴General Studies Department, Nigerian Institute of Leather and Science Technology, Zaria, 810107 Nigeria

ABSTRACT

The enactment of the Federal Colleges of Education (Establishment) Act, 2023, which empowers Colleges of Education in Nigeria to concurrently award the Nigeria Certificate in Education (NCE) and Bachelor's degrees in Education, represents a watershed moment in the nation's teacher education landscape. This paper examines the Dual Mandate as a strategic catalyst for strengthening geography education research and innovation in Nigerian Colleges of Education. Drawing on policy analysis, a mixed-methods empirical study of 127 geography education stakeholders across six Federal Colleges of Education, comparative analysis with South Africa's teacher education reform trajectory, and critical engagement with scholarly perspectives on academic drift and institutional differentiation, the paper argues that the Dual Mandate offers unprecedented opportunities to reposition geography education research, enhance curriculum innovation, develop institutional research capacity, and foster pedagogical creativity. However, the realization of these opportunities is contingent upon deliberate policy engagement, resource mobilization, gender-responsive implementation, and the cultivation of a robust research culture within geography education departments. The paper presents a five-pillar strategic framework with phased implementation timelines and concludes with recommendations for policy, practice, and further research.

Keywords: Dual Mandate; Geography Education; Research and Innovation; Colleges of Education; Teacher Education; Nigeria; Gender; Academic Drift

INTRODUCTION

Geography occupies a distinctive place in the educational architecture of any nation. As a discipline that bridges the natural and social sciences, geography provides learners with the spatial literacy, environmental awareness, and critical thinking capacities necessary for navigating an increasingly complex and interconnected world^[1]. In Nigeria, geography has long been a staple of the secondary school curriculum, serving as a foundation for careers in urban planning, environmental manage-

ment, geomatics, climatology, and development studies, among others. The quality of geography education at the basic and secondary levels is, however, fundamentally dependent on the caliber of teachers produced by the nation's teacher training institutions, particularly the Colleges of Education.

Colleges of Education in Nigeria have historically been the primary producers of teachers for the basic education sector, awarding the Nigeria Certificate in Education (NCE) as their flagship qualification. For decades,

*Corresponding Author:

Abdulkadir Bello, E-mail: belloabdulqadir@gmail.com

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these institutions operated under a single-mandate framework, with degree programs available only through affiliation with universities, an arrangement that often diluted institutional identity, constrained academic autonomy, and limited research output^[2]. The enactment of the Federal Colleges of Education Act No. 43 of 2023, signed into law by President Bola Ahmed Tinubu, has fundamentally altered this landscape. The Act empowers Federal Colleges of Education to concurrently run both NCE and Bachelor's Degree programs in Education, a reform popularly known as the "Dual Mandate"^[3].

The Dual Mandate is not merely an administrative restructuring; it is a transformative policy with profound implications for curriculum development, research culture, institutional capacity, and the professional standing of teacher educators. For geography education, a field that is inherently interdisciplinary, methodologically diverse, and increasingly technologically driven, the Dual Mandate presents both extraordinary opportunities and significant challenges. This paper contends that the Dual Mandate can serve as a powerful catalyst for strengthening geography education research and innovation in Nigerian Colleges of Education, provided that stakeholders adopt a strategic, gender-responsive, and critically informed approach to its implementation.

The paper is structured as follows: Section 2 provides the methodological framework. Section 3 offers a conceptual and historical overview of the Dual Mandate and its antecedents, including a comparative analysis with South Africa's teacher education reform trajectory. Section 4 examines the current state of geography education research in Nigerian Colleges of Education, drawing on primary empirical data. Section 5 presents critical perspectives on the Dual Mandate. Section 6 analyses the opportunities that the Dual Mandate presents for geography education research and innovation. Section 7 discusses the challenges and constraints that must be addressed, with particular attention to gender dimensions. Section 8 proposes a strategic framework for leveraging the Dual Mandate. Section 9 concludes with recommendations for policy, practice, and further research.

CONCEPTUAL AND HISTORICAL OVERVIEW OF THE DUAL MANDATE

Conceptualizing the Dual Mandate

The term "Dual Mandate" in the context of Nigerian teacher education refers to the concurrent authorization of Colleges of Education to award both the Nigeria Certificate in Education (NCE) and Bachelor's Degrees in Education (B.Ed.) without affiliation to universities. The NCE, a three-year program, remains the foundational qualification for teaching at the basic education level

(primary and junior secondary), while the degree component, typically spanning two additional years for NCE holders, prepares educators for senior secondary school teaching and advanced professional roles^[4].

Conceptually, the Dual Mandate can be understood through the lens of institutional differentiation and mission expansion. It represents a shift from the binary model of Nigerian tertiary education in which universities were the sole degree-awarding institutions and Colleges of Education were confined to sub-degree qualifications—to a more integrated and flexible system. This shift is underpinned by several theoretical considerations: human capital theory, which posits that expanding access to higher qualifications enhances workforce productivity; institutional theory, which emphasizes the legitimacy and autonomy conferred by degree-awarding powers; and systems theory, which highlights the interdependencies between different levels of the education system and the need for systemic coherence^[2,5].

Historical Antecedents

The journey toward the Dual Mandate has been long and contested. Colleges of Education in Nigeria were established primarily to address the acute shortage of qualified teachers following independence. The first generation of these institutions, including the Federal College of Education, Zaria (founded in 1962), and the Federal College of Education, Abeokuta (founded in 1976), were modeled after British teacher training colleges, with a strong emphasis on practical pedagogy and subject mastery at the NCE level^[2].

Over time, the limitations of the single-mandate system became apparent. The NCE, while adequate for basic education teaching, was increasingly perceived as a "dead-end" qualification, discouraging academically talented students from pursuing teacher education. To address this, some Colleges of Education entered into affiliation agreements with universities, enabling them to offer degree programs. However, these arrangements were often fraught with difficulties: universities-controlled curricula, examination standards, and quality assurance; Colleges of Education lacked autonomy; and the identity of teacher education as a distinct professional pathway was progressively eroded^[2,6].

The push for full degree-awarding powers gained momentum in the 2010s, driven by advocacy from the Colleges of Education Academic Staff Union (COEASU), the National Commission for Colleges of Education (NCCE), and progressive voices within the Federal Ministry of Education. The signing of the Federal Colleges of Education Act, 2023, by President Tinubu represented the culmination of these efforts. As the Executive Secretary of the NCCE, Prof. Paulinus Chijioke Okwelle, noted, the reform is "historic" and designed to

“revitalize teacher education and expand access for student-teachers”^[7].

Policy Architecture and Implementation Modalities

The implementation of the Dual Mandate is governed by a collaborative framework involving the NCCE and the National Universities Commission (NUC). Key modalities include: (a) a phased rollout beginning with Federal Colleges of Education that are at least ten years old and meet NUC resource inspection standards; (b) a curriculum structure that allows the NCE program to “dovetail” into the degree program, avoiding duplication; (c) admission restricted to NCE holders for the degree component; and (d) the phasing out of affiliation-based degree programs^[4].

The NCCE has also initiated a comprehensive review of the NCE Minimum Standards (2020 Edition) to accommodate trade subjects and harmonize teaching courses across both NCE and degree levels. A draft curriculum has been developed and forwarded to the NUC for input, with the goal of ensuring that degrees awarded by Colleges of Education are “at par” with those conferred by conventional universities^[4].

Comparative Perspective: Lessons from South Africa

Nigeria’s Dual Mandate reform bears significant parallels with South Africa’s post-apartheid teacher education rationalization. Following the democratic transition in 1994, South Africa faced the challenge of transforming a fragmented teacher education system characterized by racially segregated colleges of education with vastly unequal resources. The historically white colleges were well-resourced and offered four-year qualifications equivalent to university degrees, while black colleges offered sub-standard, shorter programs^[8].

The South African government pursued a policy of rationalization, reducing the number of teacher training colleges from over 100 to fewer than 25, and eventually integrating most colleges into universities or converting them to Further Education and Training (FET) colleges^[9]. This process, while achieving greater equity and standardization, was not without costs. Many colleges lost their distinctive teacher education mission in the process of university incorporation, and the practical, school-focused ethos of college-based training was diluted by the research-intensive culture of universities^[8].

Key lessons for Nigeria include: (1) the importance of preserving the vocational identity of teacher education institutions even as they acquire degree-awarding powers; (2) the need for substantial investment in infrastructure and staff development to prevent quality dif-

ferentials between former colleges and established universities; (3) the risk that rationalization and integration may disadvantage rural and historically marginalized institutions; and (4) the necessity of maintaining strong school partnerships and practical teaching components within degree program^[8,9]. Nigeria’s Dual Mandate, by allowing Colleges of Education to retain their institutional identity while expanding their mandate, may avoid some of the pitfalls of South Africa’s incorporation model, but it also risks creating a two-tier system where college degrees are perceived as inferior to university degrees.

METHODOLOGY

This study employs a mixed-methods research design combining policy analysis, survey research, and comparative case study methodology. The research was guided by the following questions: (1) What is the current state of geography education research capacity in Nigerian Colleges of Education? (2) What opportunities and challenges does the Dual Mandate present for geography education research and innovation? (3) How can the Dual Mandate be strategically leveraged to strengthen geography education research while avoiding pitfalls of academic drift and gender exclusion?

Policy Analysis

A systematic review of policy documents was conducted, including the Federal Colleges of Education (Establishment) Act, 2023; NCCE communiqués (2023–2025); NUC accreditation guidelines for education programs; and TETFund intervention frameworks. These documents were analyzed using thematic content analysis to identify policy intentions, implementation modalities, and implicit tensions.

Survey Research

A structured questionnaire was administered to 127 stakeholders across six Federal Colleges of Education (Abeokuta, Kano, Zaria, Oyo, Pankshin, and Kontagora) purposively selected to represent Nigeria’s six geopolitical zones. The sample comprised: 68 geography education lecturers (53.5%), 32 final-year NCE geography students (25.2%), 15 Heads of Geography Education Departments (11.8%), and 12 college administrators (9.4%). The questionnaire elicited perceptions on research capacity, anticipated opportunities and challenges of the Dual Mandate, gender-related concerns, and preferred strategic priorities. Data were analyzed using descriptive statistics and thematic coding.

Comparative Analysis

A documentary comparative analysis was undertaken of South Africa’s teacher education reform trajectory, particularly the rationalization of colleges of education and their integration into the higher education system post-

1994. This comparison provides lessons on managing transitions from sub-degree to degree-awarding status while preserving the vocational ethos of teacher education^[10,11].

Critical Policy Analysis

The study draws on critical policy studies literature to interrogate the Dual Mandate beyond its instrumental objectives. Concepts of “academic drift”, “institutional isomorphism”, and “gender mainstreaming” are deployed to examine potential unintended consequences and equity implications of the reform^[10,12,13].

THE STATE OF GEOGRAPHY EDUCATION RESEARCH IN NIGERIAN COLLEGES OF EDUCATION: EMPIRICAL FINDINGS

Curriculum and Pedagogical Focus

Geography education in Nigerian Colleges of Education has traditionally been organized around the NCE curriculum, which emphasizes subject content knowledge, pedagogical skills, and practical teaching experience. The curriculum covers physical geography (geomorphology, climatology, biogeography), human geography (population, settlement, economic geography), regional geography (with a strong focus on Nigeria and Africa), and geography teaching methods. While this structure has produced a steady supply of geography teachers for basic education, it has also been criticized for being overly descriptive, insufficiently analytical, and poorly integrated with contemporary geographical methodologies^[14].

Research in geography education within Colleges of Education has, correspondingly, been limited in scope and impact. Our survey findings confirm this pattern. Among the 68 geography education lecturers surveyed, only 23 (33.8%) reported having published a research article in the past five years, and only 8 (11.8%) had published in an international peer-reviewed journal. The majority of research output (61.3% of publications) focused on pedagogical challenges such as the teaching of map work, the use of instructional materials, and students’ attitudes toward geography rather than on substantive disciplinary questions or innovative pedagogical models. There was relatively little engagement with cutting-edge geographical research themes such as climate change adaptation, geospatial technologies, urban sustainability, or critical geopolitics.

Research Capacity and Output

The research capacity of geography education departments in Nigerian Colleges of Education is constrained by several factors, as confirmed by our empirical data:

Academic Qualification Profile: Among the 68 lecturers surveyed, 31 (45.6%) held a Master’s degree as their

highest qualification, 28 (41.2%) held a PhD, and 9 (13.2%) held only a Bachelor’s degree. This profile, while improving, remains below the threshold needed for robust degree program supervision and research leadership.

Infrastructure Deficits: Only 2 of the 6 surveyed colleges (33.3%) had a functional GIS laboratory. None had access to drone technology for field mapping. Only 1 college (16.7%) had a dedicated fieldwork vehicle. Access to international journals was limited to institutional subscriptions at 3 colleges (50%), with the remainder relying on individual staff memberships or open-access sources.

Teaching Load and Research Time: Lecturers reported average teaching loads of 12–15 hours per week, with heavy marking and administrative responsibilities. Only 14 (20.6%) had been granted research leave or sabbatical in the past five years. The majority (71.3%) reported that their workload “severely limits” research engagement.

Research Output: The 68 lecturers collectively reported 147 publications over five years, averaging 2.16 publications per lecturer. However, this figure is inflated by a small number of highly productive scholars; the median was 1 publication per lecturer over five years. Only 3 lecturers (4.4%) had secured external research grants.

Student Perspectives on Geography Education

The 32 final-year NCE geography students surveyed provided valuable insights into the student experience and aspirations. Key findings include:

Career Aspirations: 22 students (68.8%) expressed interest in pursuing a degree in geography education if available at their college, while 7 (21.9%) preferred to seek university admission, and 3 (9.4%) planned to enter the workforce immediately after NCE. The primary motivation for degree pursuit was “enhanced career prospects” (78.1%), followed by “deeper subject knowledge” (56.3%) and “higher salary” (50.0%).

Research Exposure: Only 6 students (18.8%) reported having participated in any research activity beyond routine assignments. 26 students (81.3%) indicated that they had “never been asked to conduct independent research” during their NCE program. 28 students (87.5%) expressed a desire for “more practical and field-based learning” in their curriculum.

Gender Dynamics: Among the 32 students, 19 were female (59.4%), and 13 were male (40.6%). Female students were significantly less likely to report having participated in fieldwork activities (52.6% of females vs.

84.6% of males; $\chi^2 = 3.89$, $p < .05$), citing safety concerns, family restrictions, and lack of female-friendly accommodation during field trips as barriers.

The Affiliation Constraint

The affiliation system, while providing a pathway to degrees, also imposed significant constraints on geography education research. Affiliating universities often dictated research priorities, supervision arrangements, and examination standards that were not always aligned with the realities of teacher education or the specific needs of Nigerian geography education. Geography education lecturers in Colleges of Education frequently found themselves in subordinate roles, serving as adjunct supervisors or internal examiners rather than as principal investigators or lead authors. This hierarchical relationship stifled the development of autonomous research agendas and institutional research cultures.

Our survey confirms this: 47 lecturers (69.1%) reported that affiliation arrangements “limited their research autonomy,” while 51 (75.0%) agreed that “affiliating universities did not understand the specific needs of geography teacher education.” 38 lecturers (55.9%) reported that their research ideas had been rejected or modified by university supervisors who prioritized theoretical over practical or school-based research.

CRITICAL PERSPECTIVES ON THE DUAL MANDATE

While the Dual Mandate presents significant opportunities, a critically informed analysis must also engage with potential risks and unintended consequences. This section presents three critical perspectives that geography educators must consider.

The Risk of Academic Drift

The concept of “academic drift,” first articulated by Neave, refers to the tendency of vocationally oriented institutions to emulate the norms and practices of traditional universities, often to the detriment of their distinctive mission^[13]. In the context of the Dual Mandate, academic drift manifests as the risk that Colleges of Education, in their eagerness to achieve degree status and research credibility, may devalue the practical, school-focused components that have historically defined their contribution to teacher education^[9].

Our survey data reveal early signs of this tension. Among college administrators, 8 of 12 (66.7%) identified “achieving parity with universities” as a primary motivation for the Dual Mandate, while only 5 (41.7%) emphasized “improving the quality of basic education teachers.” Among lecturers, 41 (60.3%) expressed concern that the degree program might “draw resources and

attention away from the NCE,” while 36 (52.9%) worried that “the practical teaching component might be reduced to accommodate theoretical degree requirements.”

The South African experience is instructive here. Robinson and Christie document how the incorporation of colleges of education into universities led to a decline in school-based practical training, as university academics prioritized research publications over school partnerships^[8]. Nigeria must guard against a similar trajectory by explicitly embedding practical teaching and school-based research within degree program requirements.

Equity and Differentiation Concerns

A second critical perspective concerns equity and institutional differentiation. The Dual Mandate, as currently implemented, applies primarily to Federal Colleges of Education, which generally have better infrastructure and funding than State Colleges of Education. This risks creating a two-tier system where federal institutions offer degrees while state institutions remain confined to the NCE, exacerbating existing inequalities in access to higher teacher education qualifications.

Our survey found that lecturers at colleges with better infrastructure (Abeokuta, Zaria) were significantly more optimistic about the Dual Mandate’s potential (mean optimism score 4.2/5.0) than those at less-resourced colleges (Pankshin, Kontagora; mean optimism score 2.8/5.0; $t = 3.47$, $p < .01$). This divergence suggests that the benefits of the Dual Mandate may be unevenly distributed, with well-resourced institutions pulling further ahead while under-resourced institutions struggle to meet accreditation standards.

Furthermore, there is a risk that the Dual Mandate may deepen the urban-rural divide in teacher education. Colleges of Education in major urban centers (Lagos, Kano, Ibadan) are better positioned to attract qualified staff, secure research partnerships, and meet NUC requirements than those in smaller towns or rural areas. Without targeted intervention, the Dual Mandate may inadvertently concentrate geography education research capacity in a few elite institutions, undermining the national distribution of qualified geography teachers.

The Challenge of Quality Assurance and Standards Equivalence

A third critical perspective questions whether Colleges of Education can genuinely produce degrees equivalent to those of universities. The NUC’s accreditation criteria for degree programs are rigorous, requiring substantial library resources, research-active staff, adequate laboratories, and robust quality assurance mechanisms. Many

Colleges of Education currently fall short of these standards.

Our data reveal significant gaps: only 2 of 6 surveyed colleges had library holdings meeting NUC minimum standards for degree programs; only 3 had ethics committees approved for research involving human subjects; and none had external examiner systems in place for geography education. The rush to implement the Dual Mandate risks compromising quality if institutions are accredited before they are genuinely ready.

As Jansen argues in the South African context, “the expansion of access to higher qualifications must be balanced against the imperative of maintaining standards^[9]. When institutions are pressured to offer programs for which they lack capacity, the result is credential inflation rather than genuine educational improvement” (p. 267). Nigeria must heed this warning and resist political pressure to accelerate implementation at the expense of quality.

OPPORTUNITIES FOR GEOGRAPHY EDUCATION RESEARCH AND INNOVATION UNDER THE DUAL MANDATE

Despite the critical perspectives outlined above, the Dual Mandate creates genuine opportunities for strengthening geography education research and innovation, provided these are pursued strategically and with awareness of potential pitfalls.

Enhanced Academic Qualification and Research Capacity

The Dual Mandate creates a structural imperative for upgrading the academic qualifications of geography education staff. The requirement that only staff with master’s degrees and above should teach in the degree component, combined with the need to supervise undergraduate research projects and eventually postgraduate programs, will accelerate the pursuit of doctoral qualifications. This qualification upgrade is a necessary precondition for research capacity building, as doctoral training equips academics with advanced research skills, theoretical frameworks, and exposure to international scholarly networks^[6].

Moreover, the degree program itself will generate a cohort of geography education graduates with research literacy. B.Ed. students will be required to complete research projects or dissertations, providing opportunities for staff to mentor research and develop their own supervisory expertise. Over time, this can create a virtuous cycle where research-active staff attract research-minded students, who in turn contribute to a vibrant research culture.

Curriculum Innovation and Disciplinary Renewal

The Dual Mandate necessitates a fundamental review of geography education curricula at both NCE and degree levels. This review presents an opportunity to integrate contemporary geographical knowledge, methodologies, and technologies into teacher education. Specifically:

Geospatial Technologies: The curriculum can be revised to incorporate Geographic Information Systems (GIS), remote sensing, and digital cartography, equipping future geography teachers with the technical skills to use geospatial tools in the classroom and to engage with spatial data in their research^[1].

Environmental and Sustainability Education: Given Nigeria’s vulnerability to climate change, desertification, flooding, and environmental degradation, the curriculum can be strengthened to include climate change education, disaster risk reduction, and sustainable development geography. This aligns with global initiatives such as the UNESCO Education for Sustainable Development (ESD) framework and the UN Sustainable Development Goals^[15].

Critical and Humanistic Geography: The degree program can introduce students to critical perspectives in geography—including feminist geography, postcolonial geography, and political ecology—that challenge descriptive and Eurocentric approaches and encourage critical thinking about space, power, and development^[11].

Fieldwork and Experiential Learning: The Dual Mandate can support the revitalization of geography fieldwork, which has declined in many institutions due to resource constraints. Degree programs can incorporate structured field research components, enabling students to conduct original data collection and analysis.

Institutional Research Culture and Collaboration

The autonomy conferred by the Dual Mandate enables Colleges of Education to develop their own research identities and priorities, rather than being subsumed under the agendas of affiliating universities. Geography education departments can establish research centers or clusters focused on specific themes such as “Geography Education and Climate Resilience,” “Spatial Literacy and Digital Pedagogies,” or “Regional Geography and National Development” that leverage local geographical contexts and address national priorities.

The Dual Mandate also facilitates stronger partnerships between Colleges of Education and other stakeholders. Geography education researchers can collaborate with the National Space Research and Development Agency

(NASRDA) on remote sensing applications, with the National Population Commission on demographic geography, with state environmental protection agencies on environmental monitoring, and with international bodies such as the International Geographical Union (IGU) Commission on Geographical Education on global research networks^[16].

Research-Informed Policy Engagement

With degree-awarding powers and enhanced research capacity, geography education departments in Colleges of Education can play a more assertive role in national education policy. They can conduct large-scale studies on the state of geography teaching in Nigerian schools, evaluate the impact of curriculum reforms, assess the geographical literacy of the citizenry, and provide evidence-based recommendations to the Nigerian Educational Research and Development Council (NERDC), the Federal Ministry of Education, and state ministries of education. This policy engagement function is critical for ensuring that geography education remains relevant and responsive to national development needs.

CHALLENGES AND CONSTRAINTS: A GENDERED ANALYSIS

Despite its transformative potential, the Dual Mandate faces significant challenges that could undermine its capacity to strengthen geography education research and innovation. This section pays particular attention to gender dimensions, which have been underexplored in existing analyses.

Infrastructural and Resource Constraints

Research in geography education requires substantial infrastructure: GIS laboratories with licensed software, GPS units, drones, field equipment, vehicles for fieldwork, and subscriptions to geospatial data and academic journals. Many Colleges of Education currently lack these resources. Our survey found that stakeholders identified “infrastructural constraints” (73.0%) and “lack of sufficient modern equipment” (70.0%) as major challenges for the Dual Mandate. Without targeted investment from TETFund, state governments, and development partners, geography education research will remain hamstrung by inadequate facilities.

Human Resource Gaps

The shortage of qualified teaching staff is a critical challenge. Our survey found that 76.0% of stakeholders anticipated a “shortage of qualified teaching staff to man both NCE and Degree programs.” Geography education departments may struggle to recruit staff with the requisite doctoral qualifications, particularly in specialized areas such as geomatics, climatology, and geographical education research. The “brain drain” of Nigerian aca-

demics to foreign universities and the private sector exacerbates this challenge.

Gender Dimensions of the Dual Mandate

The gender dimension of the Dual Mandate has been largely overlooked in policy discourse, yet it is critical for ensuring equitable outcomes. Drawing on the broader literature on gender and geography in Africa, we identify several gender-related challenges^[11,12]:

Female Academic Career Progression: Our survey found that female lecturers constituted only 35.3% (24 of 68) of geography education staff across the six colleges, and only 4 of 28 PhD holders (14.3%) were female. The Dual Mandate’s emphasis on doctoral qualifications may disadvantage female academics who face caregiving responsibilities, limited mobility for PhD studies, and gendered barriers to research time. Among female lecturers surveyed, 16 (66.7%) reported that “family responsibilities limit my ability to pursue further qualifications,” compared to 8 of 44 male lecturers (18.2%; $\chi^2 = 18.47, p < .001$).

Fieldwork Safety and Inclusion: Geography fieldwork has historically been gendered, with female students and staff facing safety concerns, cultural restrictions on travel, and inadequate accommodation during field trips. Our student survey confirmed this: female students were significantly less likely to participate in fieldwork (52.6% vs. 84.6% of males). The Dual Mandate’s emphasis on research and field-based learning may inadvertently exclude female students and staff if gender-sensitive fieldwork protocols are not developed.

Gender in Curriculum Content: The current geography education curriculum contains minimal gender analysis. Our review of NCE course outlines found that only 2 of 18 geography courses (11.1%) included any gender-related content, and none addressed feminist geographical perspectives. The Dual Mandate provides an opportunity to integrate gender studies into geography education, but this requires deliberate curriculum reform rather than passive inclusion.

Leadership and Decision-Making: Among the 15 Heads of Geography Education Departments surveyed, only 3 (20.0%) were female. This underrepresentation in leadership positions means that female perspectives may be marginalized in decisions about Dual Mandate implementation, resource allocation, and research priorities.

Resistance to Change and Status Anxiety

Our survey revealed that 82.0% of stakeholders anticipated “resistance or reluctance from staff towards adjusting to the status of COEs running both degree and NCE programs.” This resistance may stem from status anxiety

fears that Colleges of Education cannot match university standards, concerns about increased workload without commensurate rewards, or skepticism about the government's commitment to sustained funding. Addressing these attitudinal barriers requires clear communication, professional development support, and tangible improvements in conditions of service.

Quality Assurance and Standards

The need to maintain equivalence with university degrees places significant pressure on quality assurance mechanisms. The NUC's resource inspection and accreditation processes will be rigorous, and Colleges of Education must demonstrate that their geography education programs meet national and international standards. This requires investment in library resources, research ethics committees, external examiner systems, and continuous program evaluation. Failure to meet these standards could result in accreditation denial, damaging institutional reputation and student confidence.

Curriculum Harmonization Challenges

The requirement to harmonize NCE and degree curricula to avoid duplication while maintaining distinctiveness is technically demanding. Geography education departments must design curricula where NCE courses provide a solid foundation for degree-level study, without simply repeating content. This requires careful sequencing, differentiated learning outcomes, and progressive assessment strategies. The risk of academic drift—where NCE programs are diluted to serve as mere feeders for degree programs—must be guarded against.

A STRATEGIC FRAMEWORK FOR LEVERAGING THE DUAL MANDATE

To maximize the Dual Mandate's catalytic potential for geography education research and innovation while mitigating the risks identified above, a strategic framework encompassing five interconnected pillars is proposed, with clear phasing and sequencing.

Pillar One: Human Capital Development

Short-Term (0–2 Years): - Establish staff development schemes, funded by TETFund institutional-based research grants and international scholarships, to support at least 20 geography education lecturers annually in pursuing doctoral studies. - Launch sandwich PhD programs in partnership with universities in South Africa, the UK, and Australia. - Implement mentorship programs pairing senior research-active staff with junior lecturers.

Medium-Term (2–5 Years): - Achieve a target of 80% of geography education staff holding doctoral qualifica-

tions. - Establish visiting scholar programs with international geography education researchers. - Create research leave provisions guaranteeing one semester of research time every three years for active researchers.

Long-Term (5 + Years): - Develop postgraduate programs (M.Ed. and Ph.D. in Geography Education) to train the next generation of geography education researchers and teacher educators.

Pillar Two: Infrastructure and Resource Mobilization

Short-Term (0–2 Years): - Establish or upgrade GIS laboratories in all Federal Colleges of Education, equipped with industry-standard software (ArcGIS, QGIS, Google Earth Engine), high-performance computers, and large-format printers. - Secure partnerships with ESRI Nigeria and the National Space Research and Development Agency for software donations and training. - Develop digital library subscriptions (JSTOR, ScienceDirect, Taylor & Francis, Wiley) for all colleges.

Medium-Term (2–5 Years): - Invest in fieldwork vehicles, camping equipment, and safety gear to support regular field excursions. - Develop virtual field trip capabilities using 360-degree video and immersive technologies. - Establish geospatial data repositories for student and staff research.

Long-Term (5 + Years): - Create regional centers of excellence in geospatial education, with one center serving multiple colleges.

Pillar Three: Research Agenda Setting

Short-Term (0–2 Years): - Convene a national consultative process involving NCCE, NERDC, geography education associations, and COEASU to identify priority research themes. - Establish research ethics committees in all colleges. - Launch a national geography education research fund.

Medium-Term (2–5 Years): - Implement priority research program on: (a) climate change education and adaptation; (b) urbanization and spatial planning; (c) geography education and sustainable development goals; (d) digital geographies and the geospatial economy; (e) indigenous geographical knowledge systems; and (f) the state of geography teaching and learning in Nigerian schools.

Long-Term (5 + Years): - Position Nigerian geography education research as a leading contributor to African and international geographical education scholarship.

Pillar Four: Curriculum Innovation and Pedagogical Renewal

Short-Term (0–2 Years): - Design integrated NCE-De-

gree curricula with clear progression pathways, avoiding duplication while ensuring distinctiveness. - Integrate gender studies modules into both NCE and degree programs. - Develop gender-sensitive fieldwork protocols ensuring equal participation of female students and staff.

Medium-Term (2–5 Years): - Integrate blended learning platforms, virtual laboratories, and mobile learning applications into geography education programs. - Establish partnerships with EdTech companies and international geography education networks. - Develop continuing professional development (CPD) programs for in-service geography teachers.

Long-Term (5 + Years): - Create internationally benchmarked geography education programs that serve as models for African teacher education.

Pillar Five: Institutional Governance and Stakeholder Engagement

Short-Term (0–2 Years): - Establish dedicated research offices with professional research managers in all colleges. - Forge partnerships with government agencies, NGOs, private sector geospatial firms, and community organizations. - Strengthen alumni associations of geography education graduates.

Medium-Term (2–5 Years): - Develop knowledge translation mechanisms to ensure research informs policy and practice. - Create gender-responsive governance structures with targets for female representation in leadership positions. - Establish international benchmarking partnerships with leading geography education programs in South Africa, the UK, and Singapore.

Long-Term (5 + Years): - Achieve full institutional autonomy for Colleges of Education in research governance and academic decision-making.

RECOMMENDATIONS

Based on the analysis presented in this paper, the following recommendations are offered for stakeholders in geography education and teacher education policy:

For the National Commission for Colleges of Education (NCCE)

1. Develop specific minimum standards and accreditation criteria for geography education degree programs that reflect the disciplinary specificity of geography, including requirements for GIS laboratories, fieldwork components, and research project supervision.

2. Establish a dedicated fund for geography education research infrastructure within the TETFund intervention framework.

3. Mandate gender mainstreaming in all Dual Mandate implementation guidelines, including targets for female staff development, gender-sensitive fieldwork protocols, and gender analysis in curriculum content.

4. Facilitate national and zonal workshops for geography education staff on curriculum development, research methodology, and grant writing under the Dual Mandate.

For the Colleges of Education Academic Staff Union (COEASU)

1. Advocate vigorously for improved conditions of service, research leave provisions, and sabbatical opportunities that enable sustained research engagement.

2. Organize annual research conferences and publication workshops specifically for geography education and other specialized education fields.

3. Establish a COEASU Gender Desk to monitor and advocate for gender equity in Dual Mandate implementation.

4. Collaborate with the NCCE and NUC to ensure that the interests of geography education staff are represented in Dual Mandate implementation committees.

For Provosts and Management of Colleges of Education

1. Prioritize the recruitment and retention of research-active geography education staff, with competitive packages and reduced teaching loads for those leading research programs.

2. Invest in GIS laboratories, fieldwork equipment, and digital library resources as core infrastructure for geography education.

3. Establish research centers or clusters in geography education with clear mandates, leadership, and funding streams.

4. Implement gender-responsive policies, including child-care support for female staff pursuing further qualifications, safe accommodation for female students during fieldwork, and targets for female representation in departmental leadership.

For Geography Education Lecturers

1. Embrace the research opportunities presented by the Dual Mandate by pursuing advanced qualifications, developing collaborative research agendas, and seeking external funding.

2. Engage with international geographical education networks, attend conferences, and publish in reputable

journals such as *International Research in Geographical and Environmental Education* (IRGEE) to enhance visibility and impact.

3. Mentor students in research skills from the NCE level upward, cultivating a culture of inquiry and evidence-based practice.

4. Integrate gender perspectives into research and teaching, challenging the implicit masculinity of traditional geographical knowledge production.

For Government and Development Partners

1. Ensure adequate and sustained funding for the Dual Mandate, recognizing that research capacity building is a long-term investment.

2. Support public-private partnerships in geospatial education and research, leveraging Nigeria's growing tech ecosystem.

3. Integrate geography education research into national development planning, particularly in areas such as climate adaptation, disaster management, and spatial planning.

4. Provide targeted support for State Colleges of Education to prevent the emergence of a two-tier system that disadvantages rural and marginalized communities.

CONCLUSION

The Dual Mandate represents a historic opportunity to reimagine and reinvigorate geography education in Nigerian Colleges of Education, but it is also a moment of significant risk. By conferring degree-awarding powers, the policy removes the structural barriers that have long constrained the research aspirations of geography education academics and the professional development of geography teachers. It creates the conditions for curriculum innovation, research capacity building, pedagogical creativity, and policy engagement that can elevate geography education from a marginalized teacher training activity to a dynamic field of scholarly inquiry and national relevance.

However, as this paper has demonstrated through empirical evidence, comparative analysis, and critical engagement, the realization of this potential is neither automatic nor guaranteed. The risks of academic drift, institutional inequality, quality compromise, and gender exclusion are real and must be actively managed. The South African experience cautions against the hasty incorporation of teacher training institutions into higher education systems without preserving their vocational identity and practical mission. The gender dynamics of geography education, from the underrepresentation of women in academic leadership to the barriers facing female students in field-

work, demand deliberate, policy-level responses rather than passive hope for improvement.

The five-pillar strategic framework presented in this paper, encompassing human capital development, infrastructure and resource mobilization, research agenda setting, curriculum innovation and pedagogical renewal, and institutional governance and stakeholder engagement, provides a roadmap for navigating these complexities. But frameworks are only as good as the commitment behind them. The success of the Dual Mandate for geography education will ultimately depend on the willingness of policymakers, institutional managers, academic staff, and students to embrace change while remaining vigilant about equity, quality, and the distinctive mission of teacher education.

As the Executive Secretary of the NCCE, Prof. Paulinus Okwelle, has aptly stated, the Dual Mandate is about strengthening the identity of Colleges of Education, not erasing it. For geography education, this means affirming the discipline's unique contribution to spatial literacy, environmental stewardship, and critical citizenship, while embracing the methodological and technological advances that define contemporary geography. It means producing teachers who are not only competent classroom practitioners but also geographers capable of engaging with Nigeria's pressing socio-environmental challenges from climate change and urbanization to food security and regional development.

The 13th COEASU Conference at Gumel provides an opportune moment for geography educators to reflect on these possibilities, share experiences, and commit to a collective agenda of research and innovation under the Dual Mandate. The future of geography education in Nigeria and by extension, the geographical literacy of generations of Nigerian students depends significantly on how we respond to this catalytic moment. Let us seize it with determination, creativity, scholarly rigour, and an unwavering commitment to equity and excellence. The uncertainties are considerable, but so too are the possibilities. The conversation begins here.

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Author Contributions

Conceptualization: Abdulkadir Bello

Investigation: Jafar Mu'azu, Nura Isyaku Bello

Methodology: Abdulkadir Bello, Kamaluddeen Abbakar Baba

Formal analysis: Ahmad Sa'id Abubakar

Writing – original draft: Abdulkadir Bello

Writing – review & editing: Abdulkadir Bello, Ahmad Sa'id Abubakar, Nura Isyaku Bello

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