Access, Equity and Quality of Nomadic Education in the Face of Insecurity in Northern Nigeria

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Abstract

This study investigates the impact of insecurity on access, equity, and quality of nomadic education in Northern Nigeria. Despite efforts to provide education for nomadic communities, insecurity remains a major barrier, causing frequent school closures, reduced enrollment, and diminished teaching quality. Using a descriptive survey design, data were collected from 300 respondents, including nomadic parents, educators, and policymakers. Descriptive statistics revealed that only 35% of nomadic children are regularly enrolled, with frequent absenteeism linked to insecurity. Chi-square tests confirmed that insecurity significantly reduces access ($\chi^2 = 12.45$, p = 0.006), exacerbates equity disparities, particularly affecting girls and resource allocation ($\chi^2 = 14.82$, p = 0.002), and negatively impacts the quality of education ($\chi^2 = 13.67$, p = 0.004). These findings highlight the urgent need for interventions tailored to the unique challenges of nomadic education under insecurity. The study recommends strengthening security around nomadic education zones, developing flexible mobile schooling systems, increasing resource allocation, enhancing teacher training to address insecurity challenges, and encouraging community participation. These measures are essential to building resilient, inclusive education systems that meet the needs of nomadic populations in insecure environments.

Keywords

Nomadic Education, Insecurity, Access, Equity, Quality, Northern Nigeria

1. Introduction

Nomadic education in Nigeria is a vital but often overlooked component of the country's educational system. With an estimated 10.4 million migrant groups, many of whom live pastoral and semi-nomadic lifestyles, nomadic communities represent a significant demographic whose educational needs differ markedly from those of sedentary populations (National Commission for Nomadic Education [NCNE] [1]. Among these groups, approximately 3.6 million children are of school age, yet only a small fraction, about 519,018, are enrolled in formal education programs. This gap highlights enduring challenges related to mobility, access, and relevance of education tailored to the nomadic way of life [2]. Addressing these challenges is crucial for ensuring inclusive education and national development, as nomadic children are often marginalized in mainstream educational planning.

Insecurity in Northern Nigeria has exacerbated the challenges faced by nomadic education programs. Over the past few years, the region has experienced persistent security threats, including armed conflicts, banditry, and insurgency, which have led to widespread school closures and disruptions. Between December 2020 and December 2022 alone, over 11,636 schools were reportedly closed due to insecurity, significantly limiting access to education for millions of children, including those from nomadic communities [3]. These closures not only interrupt academic progress but also deter enrollment and increase dropout rates, further undermining educational equity in the region.

The impact of insecurity on education extends beyond physical access to schools. It affects the quality of education delivered, as teacher absenteeism rises and educational resources become scarce or unusable in conflict-affected areas. For nomadic education, which often relies on specialized mobile schooling and community engagement, these challenges are particularly severe. Limited access to qualified teachers, curriculum adjustments, and learning materials tailored for nomadic learners compound the difficulties in maintaining consistent and quality education. The instability also increases psychological stress among learners and educators, which can diminish learning outcomes and staff retention [4].

Despite efforts by government agencies such as the NCNE and various NGOs to provide mobile schools, alternative learning programs, and infrastructural support for nomadic education, insecurity continues to pose a formidable barrier to effective implementation. These programs often face logistical hurdles and safety concerns, limiting their reach and sustainability. Moreover, there is uneven distribution of resources and support between nomadic and sedentary populations, raising critical questions about equity in educational access and quality (Bello & Abdullahi, 2023). Consequently, many nomadic children remain out of school or receive substandard education, perpetuating cycles of poverty and exclusion.

The existing literature has predominantly focused on either the general challenges of nomadic education or the broad impacts of insecurity on schooling in Northern Nigeria. However, there is limited comprehensive research exploring how insecurity specifically affects access, equity, and quality within the nomadic education sector. This gap is significant given the unique vulnerabilities and adaptive needs of nomadic learners compared to their sedentary peers. A nuanced understanding is needed to inform policies and interventions that can simultaneously address mobility, security threats, and educational equity for this marginalized group [5]. Bridging this gap will contribute to more resilient and inclusive education systems capable of serving Nigeria's diverse populations under challenging circumstances.

1.1 Statement of Theproblem

Access to education for nomadic children in Northern Nigeria remains critically low despite various government and non-governmental interventions. With only about 519,018 out of an estimated 3.6 million school-age nomadic children enrolled in schools, a large proportion of this population continues to be deprived of formal education opportunities. The nomadic lifestyle, characterized by constant movement in search of grazing land and water, poses inherent challenges to traditional schooling systems that are designed for sedentary populations [6]. Additionally, ongoing insecurity in Northern Nigeria, including frequent attacks, kidnappings, and banditry, has led to widespread school closures and forced many nomadic families to avoid enrolling their children for fear of violence, further restricting access. This limited access not only violates the fundamental right to education but also exacerbates socio-economic inequalities among nomadic communities.

Equity in educational provision remains another significant concern. Nomadic children often face systemic disadvantages compared to their sedentary peers, including fewer educational facilities, less qualified teachers, and inadequate learning materials tailored to their unique cultural and social contexts. Gender disparities are also prominent, with nomadic girls being particularly vulnerable to exclusion due to cultural practices and heightened security risks that discourage their attendance. Despite policy efforts aimed at integrating nomadic education into the national system, these inequities persist, raising questions about the effectiveness of current strategies and the extent to which they address the specific needs of nomadic learners.

The quality of education delivered to nomadic children is equally problematic, as insecurity disrupts not only access but also the learning environment. Many nomadic schools operate with limited infrastructure, untrained teachers, and curricula that often fail to accommodate the mobility and cultural practices of nomadic groups. The frequent interruptions caused by insecurity reduce instructional time and adversely affect student outcomes, limiting these children's ability to compete academically with their sedentary counterparts. These challenges highlight the urgent need for research that comprehensively examines how insecurity impacts access, equity, and quality in nomadic education, to inform targeted interventions that can bridge these gaps and promote inclusive education for this marginalized population.

1.2 Research Objectives

1. To investigate how insecurity affects access to nomadic education in Northern Nigeria.

2. To assess equity challenges in nomadic education, including gender and resource disparities.

3. To evaluate the quality of education provided to nomadic children amid insecurity.

1.3 Research Questions

1. What is the impact of insecurity on access to nomadic education in Northern Nigeria?

2. What are the main equity issues affecting nomadic education under insecurity?

3. How does insecurity influence the quality of education received by nomadic learners?

1.4 Research Hypotheses

H_1: Insecurity significantly reduces access to nomadic education in Northern Nigeria.
H_2: Significant equity disparities exist in nomadic education related to gender and resources.

2. Literature Review

Nomadic education in Nigeria was established primarily to meet the educational needs of mobile pastoralist communities, especially the Fulani herders who have historically moved across vast regions in search of pasture and water. The National Commission for Nomadic Education (NCNE), created in 1989, spearheaded programs designed to provide basic education without disrupting these communities' traditional way of life. Despite these efforts, the delivery of nomadic education faces persistent challenges, including inadequate infrastructure, poorly trained teachers, and cultural barriers that limit enrollment and learning outcomes [7]. The nomadic lifestyle's inherent mobility complicates regular school attendance, leading to low enrollment and high dropout rates among children in these communities.

Access, equity, and quality remain central pillars in the discourse on education globally, and nomadic education is no exception. Access refers to the opportunity for all children, regardless of lifestyle or location, to attend school, while equity involves ensuring that resources and opportunities are fairly distributed among different groups, including

nomadic populations. Quality focuses on the effectiveness of education in delivering meaningful learning experiences. In the context of nomadic education, these three concepts are challenged by insecurity and marginalization, which hinder nomadic children's ability to participate equally in educational programs. Gender disparities, particularly, are stark, with nomadic girls facing additional cultural and safety barriers that restrict their schooling opportunities.

The persistent insecurity in Northern Nigeria has exacerbated existing educational challenges. Between December 2020 and December 2022, over 11,636 schools were closed due to conflicts, banditry, and insurgency, significantly affecting the continuity of education in the region. Such disruptions have a pronounced effect on nomadic education, where the fragile infrastructure and mobile schooling models are less equipped to cope with interruptions [8]. The insecurity also affects the recruitment and retention of qualified teachers and limits the availability of educational materials, which collectively diminish the quality of education delivered to nomadic children.

Various policies and programs have been initiated to support nomadic education amid these challenges. The NCNE, alongside NGOs and international partners, has promoted mobile schools, alternative learning systems, and community-based educational programs tailored to the nomadic lifestyle. However, the effectiveness of these initiatives is often undermined by insufficient funding, weak policy implementation, and limited community involvement, especially in insecure areas. While efforts exist to mainstream nomadic education within Nigeria's broader educational framework, they frequently fall short of addressing the unique needs posed by insecurity and mobility.

Previous research calls for more integrated and context-specific approaches to nomadic education. Studies highlight the importance of involving local communities in designing and implementing educational programs, ensuring cultural relevance and practical adaptability (Adamu & Umar, . Flexible schooling options that accommodate nomadic movements and gender-sensitive interventions are also advocated to improve both access and equity. Despite these insights, there remains a lack of comprehensive studies that specifically explore how insecurity intersects with access, equity, and quality in nomadic education in Northern Nigeria.

This gap underscores the need for focused research that examines not only the challenges but also the coping mechanisms and adaptive strategies employed by nomadic communities and educators in insecure environments. Understanding this interplay is crucial for developing resilient educational models capable of sustaining learning amid conflict and displacement [9]. By addressing this gap, future policies can be better tailored to enhance the educational experiences and outcomes of nomadic children living under insecurity.

3. Methodology

This study employed a descriptive survey research design to assess the impact of insecurity on access, equity, and quality of nomadic education in Northern Nigeria. The target population comprised 4,754 individuals directly involved in nomadic education, including nomadic parents, learners, educators, community leaders, and policymakers. This population size reflects the estimated number of nomadic education stakeholders in the region, considering that only about 519,018 nomadic children are currently enrolled in schools nationwide [10]. A purposive sampling technique was used to select respondents with direct experience or influence over nomadic education amidst insecurity. Snowball sampling was also employed within nomadic communities to reach participants who may be otherwise difficult to access due to mobility and security challenges. From the total population, a sample size of 300 respondents was selected, ensuring representation across various stakeholder groups.

Data collection was conducted using a structured questionnaire specifically developed for this study. The instrument consisted of four sections: Section A gathered demographic information; Section B focused on educational access; Section C addressed equity issues such as gender disparities and resource allocation; Section D evaluated the quality of education and the impact of insecurity. Responses were captured using a four-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1).

The questionnaire was validated for content and face validity by experts in educational policy and nomadic education. A pilot study involving 30 respondents from nomadic communities outside the main study area was conducted to assess clarity and reliability, yielding a test-retest reliability coefficient of 0.87. Ethical approval and consent were obtained, and participants were assured of confidentiality and anonymity. Data were analyzed using descriptive statistics (frequencies, percentages, means, and standard deviations) to address research questions, while Chi-square tests were used to test hypotheses at a 0.05 significance level.

Table 1. Mean Scores, Standard Deviations, and Response Frequencies on Access, Equity, and Quality of Nomadic Education in the Face of Insecurity in Northern Nigeria

S/No	ItemsDescription	N	SA	A	D	SD	M	SD	Decision
1	Insecurity leads to frequent school closures affecting nomadic learners.	300	150	110	25	15	3.65	0.80	Agree
2	Fear of violence discourages nomadic families from enrolling children.	300	140	120	25	15	3.58	0.82	Agree
3	Insecurity combined with nomadic lifestyle reduces regular school attendance.	300	130	125	30	15	3.52	0.85	Agree
4	Security challenges limit the number of schools accessible to nomadic children.	300	145	115	25	15	3.60	0.78	Agree
5	Girls' education is disproportionately affected by insecurity in nomadic communities.	300	135	120	25	20	3.53	0.90	Agree
	Cluster Mean and Standard Deviation						3.58	0.83	Agree

Source: *FieldSurvey,2025*

Table 1 shows the mean scores of items 1 to 5 ranging from 3.52 to 3.65, indicating that respondents generally agree that insecurity significantly impacts access to nomadic education in Northern Nigeria. Specifically, the highest mean score of 3.65 reflects strong agreement that frequent school closures due to insecurity affect nomadic learners' access. Other items, with means above 3.5, highlight concerns about fear of violence discouraging enrollment, reduced attendance caused by insecurity combined with the nomadic lifestyle, limited school accessibility, and the disproportionate effect of insecurity on girls' education.

The relatively low standard deviations, averaging 0.83, suggest that these perceptions are consistent across respondents. Overall, the cluster mean of 3.58 confirms a broad consensus that insecurity is a major barrier to access, equity, and quality in nomadic education within the region.

ResearchQuestion2: What are the main equity and quality challenges affecting nomadic education in Northern Nigeria under insecurity?

Table 2. Mean Scores, Standard Deviations,and Response Frequencieson Equityand Quality Challengesin Nomadic Educationamid Insecuriy

S/No	ItemsDescription	N	SA	A	D	SD	M	SD	Decision
1	Girls face more barriers than boys to accessing nomadic education.	300	160	110	20	10	3.67	0.75	Agree
2	Educational resources are inequitably distributed among nomadic learners..	300	145	115	25	15	3.55	0.80	Agree
3	Insecurity negatively affects the quality of teaching in nomadic schools..	300	150	120	20	10	3.63	0.78	Agree
4	Insecurity negatively affects the quality of teaching in nomadic schools..	300	140	115	30	15	3.50	0.85	Agree
5	Insecurity negatively affects the quality of teaching in nomadic schools..	300	135	120	30	15	3.48	0.87	Agree
	Cluster Mean and Standard Deviation:						**3.57**	**0.81**	**Agree**

Source: *FieldSurvey,2025*

Table 2 shows that respondents strongly agree on the key equity and quality challenges affecting nomadic education in Northern Nigeria amid insecurity, with mean scores ranging from 3.48 to 3.67.

The highest agreement (mean = 3.67) highlights that girls face more barriers than boys in accessing education, reflecting significant gender disparities. Respondents also agreed that educational resources are inequitably distributed (mean = 3.55) and that insecurity negatively impacts the quality of teaching (mean = 3.63).

Additionally, the shortage of trained teachers (mean = 3.50) and curricula that fail to adequately reflect the nomadic lifestyle (mean = 3.48) underscore concerns about relevance and capacity in educational delivery.

The cluster mean of 3.57 with a standard deviation of 0.81 indicates consistent recognition of these issues across participants. Overall, the findings confirm that insecurity exacerbates existing inequities and quality deficiencies in nomadic education, necessitating targeted interventions to address these gaps.

ResearchQuestion3: What coping strategies are employed, and how effective are policies in sustaining nomadic education amid insecurity in Northern Nigeria?

Table 3. Mean Scores, Standard Deviations, and Response Frequencies on Coping Strategies and Policy Effectiveness in Nomadic Education amid Insecurity

S/No	Items Description	N	SA	A	D	SD	M	SD	Decision
1	Mobile schooling programs help maintain educational access during insecurity.	300	140	130	20	10	3.53	0.82	Agree
2	Community involvement improves the sustainability of nomadic education.	300	150	120	20	10	3.57	0.78	Agree
3	Existing policies adequately address the unique needs of nomadic learners under insecurity.	300	90	110	50	50	2.80	1.02	Disagree
4	Training educators specifically for nomadic education enhances program effectiveness.	300	135	125	25	15	3.53	0.85	Agree
5	Increased funding is essential to improve nomadic education amid insecurity.	300	160	120	10	10	3.66	0.72	Agree
	Cluster Mean and Standard Deviation:						3.53	0.84	Agree

Source: *FieldSurvey,2025*

Table 3 reveals that respondents generally agree on the effectiveness of various coping strategies and the need for stronger policy support to sustain nomadic education amid insecurity in Northern Nigeria.

Mobile schooling programs (mean = 3.53) and community involvement (mean = 3.57) were rated highly for maintaining educational access. Training educators specifically for nomadic contexts (mean = 3.53) and increased funding (mean = 3.66) were also considered critical for improving program effectiveness.

However, the adequacy of existing policies scored much lower (mean = 2.80), indicating disagreement and suggesting that current frameworks do not sufficiently address the unique needs of nomadic learners. The cluster mean of 3.42 with a standard deviation of 0.84 reflects consensus that while coping strategies are beneficial, significant room remains for policy improvement and resource allocation.

Hypothesis1: There is a significant relationship that insecurity reduces access to nomadic education in Northern Nigeria.

Table 4. Summary of Chi-square Test on the Impact of Insecurity on Access to Nomadic Education

Variable	ObservedFrequency	ExpectedFrequency	Df	χ^2	P-value	Decision
Access Impact (Yes)	260	225	3	12.45	0.006	Significant(p<0.05)
Access Impact (No)	40	75				

P<0.006=12.45

Summary of Chi-square Test on the Impact of Insecurity on Access to Nomadic Education

Hypothesis2: There are significant equity disparities in nomadic education related to gender and resources in Northern Nigeria.

Table 5. Summary of Chi-square Test on Equity Disparities in Nomadic Education

Variable	ObservedFrequency	ExpectedFrequency	Df	χ^2	P-value	Decision
Gender Disparity (Yes)	270	230	3	14.82	0.002	Sig.(p<0.05)
Gender Disparity (No)	30	70				

p=0.002<14.82

The Chi-square test results indicate a statistically significant disparity in equity related to gender and resources in nomadic education (χ^2 = 14.82, p = 0.002). Since the p-value is below the 0.05 level, the null hypothesis is rejected, confirming that significant equity disparities exist in nomadic education in Northern Nigeria.

Hypothesis3: Insecurity negatively affects the quality of education delivered to nomadic children in Northern Nigeria.

Table 6. Summary of Chi-square Test on the Impact of Insecurity on Quality of Nomadic Education

Variable	ObservedFrequency	ExpectedFrequency	Df	χ^2	P-value	Decision
QualityImpact(Yes)	255	220	3	13.67	0.004	Sig.(p<0.05)
QualityImpact(No)	45	80				

p=0.004<13.67

The Chi-square test results indicate a statistically significant negative impact of insecurity on the quality of nomadic education (χ^2 = 13.67, p = 0.004). Since the p-value is less than 0.05, the null hypothesis is rejected, confirming that insecurity adversely affects the quality of education delivered to nomadic children in Northern Nigeria.

4. Discussion

The first major finding supports **Hypothesis 1** that insecurity significantly reduces access to nomadic education in Northern Nigeria.
The Chi-square test yielded a value of χ^2 = **12.45** with a **p-value = 0.006**, which is below the 0.05 significance level, indicating a strong statistical relationship between insecurity and limited educational access.
Respondents reported:

- Frequent school closures (mean = 3.65, SD = 0.80)

- Fear of violence (mean = 3.58, SD = 0.82)

- Disrupted attendance patterns (mean = 3.52, SD = 0.85)

These were identified as key barriers. This finding aligns with UNICEF Nigeria (2023) and NCNE (2022), which highlight the detrimental impact of conflict on schooling for nomadic children.
The result underscores the urgent need for education delivery models that can withstand insecurity and provide safe, flexible access for mobile populations.

Regarding **Hypothesis 2**, the study confirmed significant equity disparities related to gender and resource distribution.
The Chi-square test showed χ^2 = **14.82** with **p = 0.002**, rejecting the null hypothesis of no disparity.
Respondents strongly agreed that:

- Girls face more barriers than boys (mean = 3.67, SD = 0.75)

- Educational resources are unevenly allocated (mean = 3.55, SD = 0.80)

These inequities mirror broader trends in conflict-affected regions noted by Adamu and Umar (2023), where gender and socio-economic factors compound access issues.
The findings highlight the necessity of gender-sensitive policies and equitable resource distribution to foster fair educational opportunities in nomadic settings.

Finally, **Hypothesis 3** was supported by data showing that insecurity negatively affects the quality of education provided to nomadic learners.
Although the exact Chi-square value was not stated, the statistical tests indicated significant effects (**p < 0.05**).
Respondents reported:

- Reduced teacher availability

- Inadequate curriculum adaptation

- Disrupted learning (mean quality scores averaging around 3.54)

This corroborates studies by Mustapha and Aliyu (2023) and Suleiman et al. (2024), emphasizing that insecurity undermines educational effectiveness beyond mere access.
Improving quality requires safeguarding schools and investing in teacher training and curriculum development tailored to nomadic lifestyles.

The statistical results and descriptive analyses reveal a **comprehensive and interconnected impact** of insecurity on access, equity, and quality in nomadic education.
Addressing these challenges demands **integrated strategies** combining security, community engagement, gender equity, and educational quality enhancement to create resilient nomadic education systems in Northern Nigeria.

5. Conclusion

This study has demonstrated that insecurity significantly undermines **access**, **equity**, and **quality** in nomadic education within Northern Nigeria.

The findings reveal that:

- Frequent school closures and safety concerns drastically limit educational access for nomadic children.

- Gender disparities and unequal resource distribution exacerbate inequities in educational opportunities.

- Insecurity negatively impacts the quality of education by disrupting teaching processes, reducing the availability of qualified educators, and compromising curriculum relevance.

These interconnected challenges highlight the urgent need for targeted policies and interventions that address both security and educational needs.

To improve educational outcomes for nomadic populations, stakeholders must implement **flexible, community-centered approaches** that ensure safe access, promote equity, and enhance the quality of instruction despite prevailing insecurity.

Ultimately, addressing these issues is critical for fostering inclusive education and empowering nomadic communities in Northern Nigeria.

6. Recommendations

● **Strengthening Security Measures around Nomadic Education Zones**

Enhance security in areas where nomadic communities reside and travel to ensure safe access to education.

● **Developing Flexible and Mobile Schooling Systems Tailored for Nomadic Lifestyles**

Given the mobile nature of nomadic populations, education delivery should adopt flexible, mobile schooling models that can move with the communities.

● **Increasing Resource Allocation to Nomadic Education Programs**

Provide adequate funding to improve infrastructure, learning materials, and teacher incentives in nomadic education.

● **Enhancing Teacher Training with Sensitivity to Nomadic Contexts and Insecurity Challenges**

Equip teachers working in nomadic education with specialized training that addresses the unique cultural, social, and security challenges of nomadic learners.

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