



Reviews

Resource-Based Livelihoods and Youths' Educational Participation in Rural Nigeria: Evidence from Agoi, Yakurr Lga

Bassey John Okoi^{1,*}, Ruth Moses Onen², Daniel Joshua Ikot³, Christiana Efut Okoi¹, Solomon Oka Ofem¹

¹Curriculum Studies, Educational Management and Planning, University of Uyo, Uyo, Nigeria

²Animal and Environmental Biology, University of Cross River State, Calabar, Nigeria

³Educational Management and Planning, University of Calabar, Calabar, Nigeria

*Corresponding author: Bassey John Okoi, basseyjohn09079@mail.com

Abstract

This study investigated the effects of resource-based livelihood activities specifically gold mining, timber extraction, and agricultural production (cocoa and yam) on youths' educational participation in Agoi communities, Yakurr LGA, Cross River State, Nigeria. Employing a survey research design and triangulated methodology, data were collected from 300 students selected from three purposively chosen public secondary schools and integrated with school attendance and retention records. Data were analyzed using composite mean indices and trend relationship analysis. Findings revealed that all three livelihood activities negatively influence school attendance, retention, and completion. Agricultural production recorded the strongest effect (composite mean = 2.87), followed by gold mining (2.61) and timber extraction (2.60). Seasonal attendance declined to 49-55% during peak livelihood periods, and completion rates ranged from 66.7% to 72.6% across schools. The study concludes that resource-based livelihoods impose structural opportunity costs on youths' education and recommends integrated policy interventions including conditional cash transfers, regulatory enforcement of child labour legislation, and school-compatible livelihood diversification programmes.

Keywords

Rural education, Child labour, School attendance, Dropout, Rural livelihoods, Nigeria

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1. Introduction

Education is generally recognized as a fundamental force of human capital development, social mobility, and sustainable socioeconomic growth, particularly in developing countries such as Nigeria. It serves as a reliable gauge of the effectiveness of a nation's leadership in the future; it also facilitates civilization and provides a sense of belonging to youths in the society [1]. Its essence is to raise youths with sound mind and good thinking faculty readily available in solving societal problems and contribute meaningfully for the growth of the country. Youth educational participation measured through school enrolment, attendance, retention, and completion plays a critical role in bringing civilization and breaking inter-generational cycles of poverty which in turn fosters inclusive development [2].

Resource-based livelihood such as artisanal gold mining, timber extraction, and agricultural production serves as means of rural economies in Nigeria. While these activities not only provide income opportunities and employment for households, they serve as a major source of generating revenue. Although, often exert competing demands on youths' time and labor, thereby intersecting their engagement with formal education. Studies have shown that in resource-dependent communities, children and youths are frequently drawn into income-generating activities as a survival strategy, which can reduce school attendance, increase dropout rates, and undermine academic performance [3]. This tension between immediate economic benefits and long-term educational investment represents a persistent development dilemma. Youths' involvement in artisanal and small-scale gold mining, in particular, has grown drastically in rural Nigeria due to the increase unemployment rate. Mining contributes to household income, it is often associated with child labor, irregular school attendance, and early school withdrawal, most prevalent among male youths who perceive mining as a quicker means to financial independence than education [4]. Similarly, timber extraction activities seen as another major means of survival has largely influence the extent to which youths participate to educational activities. Agricultural production (cash crops), such as cocoa and staple foods like yam, also plays a dual role in youth education. While this cash crops support household income and finance schooling; on the other hand, it requires persistent presence from youths which often draw school-aged youths into farm work during planting and harvest seasons [5].

Many factors like cybercrime (yahoo-yahoo), economic hardship, unemployment, poor quality education etc. contribute to decline in educational interest by youths in most of the rural areas of Nigeria [6], in cocoa-producing communities, evidence suggests that youths' involvement in farm activities frequently overlaps with school hours, thereby negatively affecting educational participation, especially where poverty and limited access to educational infrastructure persist. Many youths often feel formal education is a long means of making money thereby considers other quicker means of livelihood and neglecting education.

Within Cross River State, Agoi communities in Yakurr Local Government Area present a unique context where gold mining, timber extraction, and agricultural production (notably cocoa and yam) coexist as dominant livelihood activities. Despite their economic importance, these activities have been associated with declining youth engagement in formal education, manifested in absenteeism, late school entry, and school dropout. While previous studies have examined the effects of individual livelihood activities on education such as artisanal mining [7,8] or agricultural labour [9] most existing research focuses on single sectors or broader regional analyses. This leaves a critical gap in context-specific, multi-sector understanding of how multiple resource-based activities interact to shape educational outcomes at the community level. No known empirical study has simultaneously examined the combined influence of gold mining, timber extraction, and agricultural production on youths' educational participation within a single rural Nigerian community. Against this backdrop, this study addresses the identified gap by examining resource-based livelihoods and youths' educational participation in rural Nigeria: evidence from Agoi, Yakurr LGA. By situating the analysis within the lived realities of a resource-dependent rural community, the study generates context-specific empirical evidence to advance ongoing debates on education, child labour, and sustainable rural development in Nigeria.

2. Conceptual Review

Figure 1 below shows the conceptual model of this study developed to explain the relationship between resource-based livelihood activities and youths' educational participation. In the model, mining, timber extraction, and agricultural production (cocoa and yam) constitute the independent variables, representing major economic activities within the study area that engage youth labour and time.

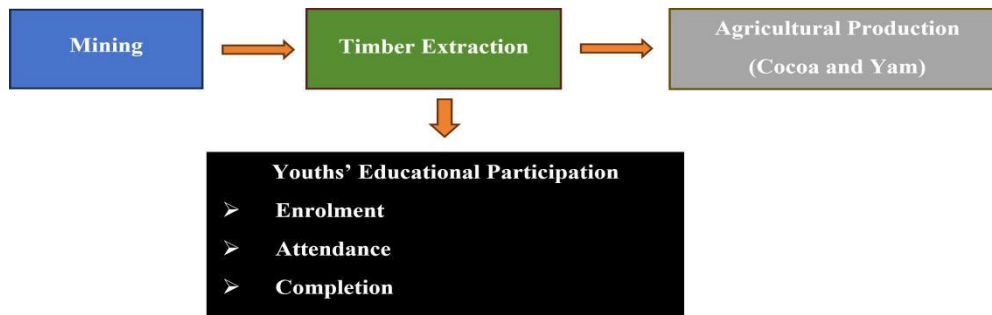


Figure 1. Conceptual model.

These livelihood activities are assumed to exert influence on youths’ educational participation, which is the dependent variable and is measured in terms of school enrolment, attendance, retention, progression, and completion.

2.1 Mining

Mining is an integral activity that requires human capital effort. It is the extraction of minerals and precious metals from the earth. These minerals and metals consist of manganese, tantalum, copper, tin, silver, diamonds and gold, stone, granite, etc which are of economic value [10]. Mining activities has reported by many scholars to have intersect with educational activities [11]. Their study argued that a society's social structure is determined by its economic structures. As a result, the environment's socioeconomic classes have a direct impact on the pupils' motivation to learn. Since the community's socioeconomic structure includes illegal mining, those actions have a stronger impact on the pupils. [12] holds that mining sector has been growing steadily in Ghana but its effect on economic development and inclusive growth remains uncertain.

For instance, small-scale mining has become popular as a panacea for poverty reduction in most developing countries including Ghana. However, how small-scale mining activities influence students’ academic performance and education, in general, remains tentative. Using a qualitative research design, their study assesses the effects of small-scale mining activities on students at Kwabeng township, one of the small-scale mining hubs in Ghana. The findings revealed that small-scale mining activities stress students and disallow them from excelling in school. Lack of attention in class, low attendance to school, lateness to school, absenteeism, and school dropout were major challenges that constrained the academic performance of students in the Kwabeng township. Moreso some researches have indicated that mining has historically shaped students’ educational attainment as school age children are drawn into labour, disrupting school attendance, and limiting academic progress [13,14]. Addressing these challenges requires integrated strategies aimed at reducing reliance on artisanal mining, supporting vulnerable households and strengthening access to quality schooling.

Across the literature, mining activities are consistently associated with disrupted schooling, though the mechanisms. While [7] identified direct absenteeism as the primary pathway, [12] found that stress and attentional disruption rather than outright absence were the dominant effects in their Ghanaian sample. More recent Nigerian evidence from [13] and [15] confirms that historical and ongoing mining operations shape enrolment and completion rates, with male youths disproportionately affected. Collectively, these findings suggest that mining influences education through multiple, overlapping pathways immediate absenteeism, fatigue-driven disengagement, and gradual dropout all of which are relevant to the Agoi context where gold mining has intensified since 2024.

2.2 Timber Extraction

Timber extraction is as important livelihood activity to communities with forest most especially in developing countries like Nigeria that forest provide many opportunities. A large portion of residents within these setting depend on timber business like firewood, carpentry, furniture business etc [15]. These activities significantly contribute to the economics of these communities by creating jobs for the locals. However, dependency on timber business may also influence social activities including youths’ level of educational involvement especially when they are involved in logging and wood related activities. Studies have it that timber business has contributed to local livelihood. Apparently, timber is used for construction, energy generation as well as providing income when process. This encourages residents including the youths to participate in timber business activities. Youths may contribute in cutting, moving log or processing the wood ready for market. While these activities help in provident income, they may reduce time and commitment required for schooling and negatively affect educational participation among them.

Similarly, [16] study shows that certain factors such as poverty and limited livelihood option force most household in involving children in timber business activities their study revealed that participation in forest product collection interfere with children’s schooling as the time used in gathering forest resources often conflicted with school activities. The study further revealed that children involved in timber related business were likely to experience irregular school attendance and affect the academic performance due to work demand. This implies that timber-based activities can create a trade-off between economic survival and educational attainment.

In Africa, [17] confirmed that timber business provides economic opportunity for rural residents by contributing to local development, this is possible through the income generated from timber harvesting that create employment to the people involve. Youths are likely attracted to these timber activities because of the income it generates which requires no formal education or skills. However, despite the quick income earn from it, it may encourage youths' participation which may demotivate the pursue of formal education. Despite the noted importance of timber activities to livelihood, most existing literature has primarily concentrated on the economic importance of timber resources and sustainable management rather than their social implications for education. For instance, [18] focused on income generation and diversifying livelihood through timber-based activities, while [16] emphasis on non-timber forest product collection. Hence, limited attention has been given to examining how timber extraction influences youths' educational participation most concerned rural areas in Nigeria. However, few studies have investigated timber extraction with other rural economic activities such as mining and agricultural production in relation to education. This gap has prompted the need for empirical research examining how timber extraction affects youths' educational participation in the study area.

2.3 Agricultural Production (Cocoa and Yam)

Cultivation of cash crops and staple crops like cocoa and yam has played a substantial role in improving local livelihood as well as economic development in Nigeria at large. It has a good record in contributing to Nigeria's economy by providing food security, employment to youths, etc. Agriculture has historically accounted for a large share of the country's gross domestic product before the discovery of crude oil. It creates employment with essential crops like cocoa being major export goods [19].

The activities of cocoa farming such as preparing the land, planting of the cocoa seeds, weeding, harvesting as well as take the proceeds to the market often demands family labour including youths. Studies has shown that cocoa production requires an active age bracket which indicate that youths are most likely needed to contribute their work force [20]. Arguably, these substances provide income to youths but may compete with some social obligations like schooling most thoughtful, during the peak farming period. In Nigeria, dominance of agricultural production is on small-scale farming that requires people contributing labour to farm activities [20]. Yam as a stable crop is largely planted around the southern part of the Nigeria. From planting, it requires labour ranging from staking, weeding of grasses, and harvesting. These activities also require youths in assisting their parents most especially during the peak of farming season. Youths' involvement may also affect the time they should have devoted to formal education particularly in communities that depends on the cultivation of yam as a means of livelihood.

Recent research on youths' involvement in cocoa farming reveals that their participation is triggered due to income and unavailability of alternative employment opportunities. [21] identified some of the challenges that youths are likely facing in participating agricultural production; limited access to land, inadequate credit facilities, high cost of farm inputs, and the labor-intensive nature of farming. Most youths are constrained by these challenges in continuing their farming activities and option for better opportunities of surviving. Existing literature are limited with youth participation in farming, agricultural productivity and constraint affecting agricultural development despite the economic importance rather than examining how these activities influence youths' involvement and strategies for improving productivity in the sector [22].

2.4 Youths' Educational Participation

Educational participation is view as the extent to which people are involved in formal learning most especially enrolment, attendance, and completion of the school. Youth participation typically requires active involvement of youths in those activities that brings about their development and the society through education and skills acquisition [23]. Education is essential in modeling youths to be responsible in the society, as well preparing them for their future endeavor. Hence, education is considered vital in equipping youths and shaping their mind to contribute meaningfully to the society. Educational participation is influenced by certain factors like socioeconomic and environmental. Recent studies revealed that access to educational opportunities is influence by income earned by household, parental support, value placed on education by the community etc [24]. In most cases youths' educational interest is hindered due to the challenges they encounter. These barriers most importantly socioeconomic status and level of income influences youths' educational participation as youths from low-income background are likely to be deprived of certain educational opportunities compared to youths from high-income earners.

In most family, youths are compared to contribute to the welfare of the family by engaging in livelihood activities like farming, trading, livestock rearing and/or other forms of labour, these activities often influence their educational participation [25]. The influence of youths' educational participation by broader social institutions would either encourage or discourage their involvement in educational processes. Providing opportunities to youths through education helps to develop capacities and more likely helps in contributing positively to national development. Even with the numerous studies on youths' educational participation, much of them are concerned on youths' engagement in civic, political or community activities rather than specifically examining youths' educational participation within local economic context. Based on this fact, there are limited empirical research that examines how these local livelihood activities like mining, timber extraction and agricultural production affect youths' educational participation particularly

in rural communities in Nigeria. This gap point on the need to further investigate how these activities influence youths' level of involvement in education in Agoi communities in Yakurr LGA.

3. Theoretical Framework

This study is anchored on two theories: Human Capital Theory (HCT) [26] and Child Labour Theory (CLT) [27]. HCT emphasizes that through education, an individual's productivity is improved and promote economy outcome. Education increases skills and knowledge thereby contributing to economic development. This theory opined that education should be seen as an investment rather than consumption because of the increase in productivity through education. This implies that participation is a means of human capital accumulation that promotes individual's welfare that brings about national development.

CLT assumes that the poverty of a household influences the decision of a child working and schooling at the same time. The proponents of this theory summarize this theory in two assumptions: parents send their child to work when income earned is below a subsistence level. Secondly, employers prefer to hire children when there are cheaper paid than adults. This implies that household economic pressure and poverty are the determinants of child labour and educational participation. Practically, this framework explain how economic activities such as gold mining, timber extraction, and agricultural production can reduce youths' educational participation by increasing the demand for household labour and immediate income. Taken together, HCT and CLT provide complementary explanatory lenses for this study. While HCT establishes that education is a rational investment in long-term productivity, CLT explains why this rational calculation breaks down under conditions of household poverty: immediate labour income becomes the dominant priority. In resource-dependent communities like Agoi, where gold mining, timber extraction, and agricultural production offer accessible short-term income, both theories predict that youths will be structurally drawn away from schooling. This dual theoretical lens therefore frames youths' educational participation not merely as a product of individual choice, but as an outcome shaped by household economic pressure, community livelihood structures, and the opportunity cost of schooling all of which this study seeks to empirically examine. As illustrated in Figure 2, the study integrates two complementary theoretical lenses. HCT posits that education is a long-term investment in productivity and development, while CLT explains the conditions under which household poverty overrides this rational calculus, compelling children and youths to prioritize immediate income over schooling. Together, these frameworks explain how resource-based livelihood activities in Agoi communities structurally constrain youths' educational participation.

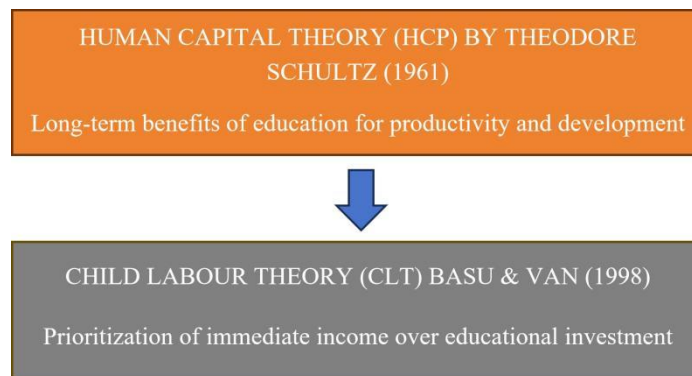


Figure 2. Theoretical framework.

4. Materials and Methods

4.1 Location of the Study

The study was carried out in Agoi communities (Agoi Ekpo, Ibami and Ekom Agoi) in Yakurr LGA of Cross River State. Yakurr is located in central Cross River State with a land area of 670km² and population of about 196,450 according to the 2006 census [27,28]. It consists of Ugep (Headquarters), Idomi, Ekori, Mkpani, Nko, Inyima, Assiga and the Agoi-identified settlements (Agoi Ekpo, Agoi Ibami, Ekom Agoi) among others. Agoi Ekpo lies between latitude 5.83609⁰ N and longitude 8.2621⁰ E with nearby communities/towns; Nko 9km N/W, Iyamitet 9km E/N, Mkpani 12km W. Agoi communities are blessed with abundant resources notably among them was the recent discovery of gold in 2024 which has placed Agoi to be more economically rich among other communities in Yakurr. Aside the gold, Agoi is said to be among the richest yam producers in cross river state. Yam has been a more source of livelihood to most indigenes of Agoi. In fact, yam is a major source of occupation in Agoi as many people have been prominent. Just like other part of Yakurr where men are given title and celebrated for a beautify yam harvest called "ladoo", this is also applicable in Agoi communities. Timber extract and coco are another source of income in Agoi as they are blessed with fertile soil with tress that earns them money. As naturally blessed as Agoi are, they seem to be lacking educationally wise. As only few public primary and secondary schools are located in Agoi with some in poor conditions. Maybe this contributes to the level of educational participation among youths in the study.

4.2 Method and Procedure

This study adopted a survey research design to investigate the effects of gold mining, timber extraction, and agricultural production (cocoa and yam) on youths' educational participation in Agoi communities of Yakurr Local Government Area, Cross River State. The survey research design was considered appropriate because it enables the collection of quantitative data from a large number of respondents within a relatively short period and allows for the examination of relationships among variables as they naturally occur in the study area. The study covers three academic sessions (2022, 2023 and 2024 see Table 1). For the purpose of clarity, the study population is centered on 2024 enrolment list from the three concerned public secondary schools distributed as follows; Technical College Agoi Ekpo 312, Tekowa Comprehensive Secondary School Agoi Ekpo 340 and Community Secondary School Agoi Ibami 471 having a total of 1,123 made up of 499 males and 624 females (as obtained from school records). These schools were purposively selected due to the prevalence of gold mining, timber extraction, and agricultural activities, as well as reported concerns about declining youths' educational participation within this area.

Table 1. Student enrolment record.

School	2022 Enrolment	2023 Enrolment	2024 Enrolment
Technical College Agoi Ekpo	351	336	312
Tekowa Comp. Sec. School	384	362	340
Community Sec. School Agoi Ibami	520	498	471
Total	1,255	1,196	1,123

Source: School Records (2026).

The sample size of 300 respondents was determined to represent a significant proportion of the total study population of 1,123 students. Proportional allocation was applied to ensure equitable representation from each school: Technical College Agoi Ekpo ($n = 84$), Tekowa Comprehensive Secondary School ($n = 91$), and Community Secondary School Agoi Ibami ($n = 125$). Within each school, simple random sampling was employed, assigning each student an equal and independent probability of selection. Two instruments were used for data collection. The Livelihood Activities and Youths' Educational Participation Questionnaire (LAYEPQ) comprised 15 items structured across three subscales gold mining (items 1-5), timber extraction (items 6-10), and agricultural production (items 11-15) each rated on a four-point Likert scale (4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree). A decision benchmark of 2.50, derived as the arithmetic mean of the scale points, was applied: mean scores ≥ 2.50 indicate a positive (affirming) response to a given item. The Students' Educational Participation Checklist (SEPC) was used to obtain supplementary institutional data on enrolment trends, seasonal attendance, and cohort completion rates from school records. Content validity was established through expert review by three educational researchers. Face validity was confirmed through participant feedback during pilot testing ($n = 40$). Internal consistency was assessed using Cronbach's alpha, yielding coefficients of $\alpha = 0.85$ for livelihood activities and $\alpha = 0.87$ for educational participation, both exceeding the conventional threshold of 0.70 [30], thereby confirming the instruments' reliability

5. Results

5.1 Age/Sex Distribution of Respondents

Table 2 shows the age, sex, and household size distribution of respondents. Most respondents were within the 15-17 years (38%) and 18-20 years (33%) age brackets, indicating that the study largely captured youths at critical stages of secondary education where school attendance, retention, and completion are most vulnerable to disruption by livelihood activities. Respondents aged 21-25 years accounted for 29%, representing older youths with increased exposure to income-generating activities. Female respondents constituted 56%, while males accounted for 44%. This balanced representation allows for meaningful interpretation of gender-related dimensions of youths' educational participation, particularly given the differing roles of males and females in mining, timber extraction, and agricultural production. Regarding household size, 72% of respondents came from households with 1-5 members, while 28% were from households with 6-10 members. Larger household sizes may increase youths' involvement in livelihood activities due to higher labour demands, potentially affecting school attendance and progression. Overall, the demographic profile of respondents is appropriate for examining the effects of gold mining, timber extraction, and agricultural production on youths' educational participation in the study area.

Table 2. Age, sex, household size distribution of respondents.

Age	Frequency	Percentage
15-17	115	38
18-20	99	33
21-23	54	18
24-25	32	11
Sex		
Male	131	44
Female	169	56
Household Size		
1-5	216	72
6-10	84	28
11-15	-	-

Source: Field Survey, 2026.

5.2 Gold Mining and Youths' Educational Participation

Table 3 presents the distribution of respondents' perceptions of the effects of gold mining on youths' educational participation four of the five items recorded mean scores above the 2.50 benchmark, confirming that gold mining reduces regular school attendance, distracts youths from academic work, increases dropout risk, and promotes preference for mining income over education. The single exception item 2 (mean = 2.39) warrants analytical attention: the relatively lower agreement that youths 'often miss school to participate in mining activities' suggests that mining's educational harm is not always manifest as acute daily absenteeism. Rather, consistent with [8] and [13], the pathway appears more gradual through fatigue, reduced concentration, and eventual dropout especially for youths who engage in informal mining after school hours or during weekends. This nuance has important implications for policy, as attendance monitoring alone may be insufficient to capture the full educational cost of youth mining involvement.

Table 3. Distribution of Respondents based on perception of Gold Mining and Youths' Educational Participation.

S/N	Statement	SA	A	D	SD	Total	Mean	Decision
Gold Mining and Youths' Educational Participation								
1	Involvement of youths in gold mining reduces their regular school attendance.	392	258	134	49	833	2.77	Positive
2	Youths engaged in gold mining often miss school to participate in mining activities.	236	246	154	82	718	2.39	Negative
3	Gold mining activities distract youths from concentrating on their schoolwork	356	219	148	64	787	2.62	Positive
4	Participation in gold mining increases the likelihood of school dropout among youths.	400	228	118	65	811	2.70	Positive
5	Income from gold mining encourages some youths to value mining more than education.	388	147	172	68	775	2.58	Positive

Source: Field Survey, 2026. Note: SA, strongly agree; A, agree; D, disagree; SD, strongly disagree. Score values: SA = 4, A = 3, D = 2, SD = 1.

5.3 Timber Extraction and Youths' Educational Participation

Evidence from Table 4 demonstrate that four items confirmed that timber extraction disrupts regular attendance, causes absenteeism during logging seasons, contributes to lateness, and reduces completion prospects. The below-benchmark score for item 10 which asked whether timber activities reduce youths' interest in formal schooling suggests that behavioural disengagement (missing school) and attitudinal disengagement (losing interest in education) should be distinguished. Many youths may continue to value education while being structurally prevented from fully participating due to household labour obligations during logging periods. This distinction aligns with the Child Labour Theory

framework applied in this study: where income falls below subsistence level, household labour demand overrides individual educational aspirations, even when those aspirations remain intact

Table 4. Distribution of respondents based on perception of timber extraction and youths' educational participation.

S/N	Statement	SA	A	D	SD	Total	Mean	Decision
	Timber Extraction and Youths' Educational Participation							
6	Timber extraction activities prevent youths from attending school regularly.	316	273	154	53	796	2.65	Positive
7	Youths involved in timber extraction are often absent from school during logging periods.	412	234	124	57	827	2.75	Positive
8	Timber extraction contributes to lateness among school-going youths	352	270	82	81	785	2.61	Positive
9	Engagement in timber extraction affects youths' ability to complete their education.	384	234	136	58	812	2.70	Positive
10	Timber extraction activities reduce youths' interest in formal schooling.	236	228	124	104	692	2.30	Negative

Source: Field Survey, 2026. Note: SA, strongly agree; A, agree; D, disagree; SD, strongly disagree. Score values: SA = 4, A = 3, D = 2, SD = 1.

5.4 Agricultural Production (Cocoa and Yam) and Youths' Educational Participation

The analysis in Table 5 reveals that all the five items under agricultural production recorded mean scores above the benchmark. The respondents agreed that cocoa and yam farming interferes with school attendance, which leads to withdrawal of youths from school to assist on farms activities, reduces time devoted to studies, increases dropout risk, and encourages preference for farming due to quicker income. Notably, item 12 recorded the highest mean score with the lowest standard deviation (0.82), indicating strong consensus that agricultural labour directly removes youths from schooling. This reflects the labor-intensive nature of cocoa and yam production in Agoi communities and supports the study's claim that seasonal farming activities significantly disrupt educational continuity.

Table 5. Distribution of respondents based on perception of agricultural production (Cocoa and Yam) and youths' educational participation.

S/N	Agricultural Production (Cocoa and Yam) and Youths' Educational Participation	SA	A	D	SD	Total	Mean	Decision
11	Cocoa and yam farming activities interfere with youths' school attendance.	424	258	148	34	864	2.88	Positive
12	Youths are often withdrawn from school to assist in cocoa and yam farming activities.	632	231	90	20	972	3.24	Positive
13	Agricultural production reduces the time youths devote to their studies.	440	213	116	61	830	2.76	Positive
14	Participation in cocoa and yam farming increases the risk of school dropout among youths.	392	237	130	58	817	2.72	Positive
15	Some youths prefer farming to schooling because it provides quicker income.	404	249	112	60	825	2.75	Positive

Source: Field Survey, 2026. Note: SA, strongly agree; A, agree; D, disagree; SD, strongly disagree. Score values: SA = 4, A = 3, D = 2, SD = 1.

5.5 Trend Relationship Analysis

Table 6 present composite index trend analysis and triangulation of questionnaire responses with school records, the analysis demonstrates that gold mining, timber extraction, and agricultural production significantly constrain youths' educational participation in Agoi communities. The observed decline in attendance during livelihood peak periods, coupled with high dropout rates, suggests that economic survival imperatives systematically override educational commitments. Agricultural production (cocoa and yam) exerts the strongest negative influence, reflecting its labor-intensive and seasonal nature, which often overlaps with academic schedules. Timber extraction and gold mining similarly disrupt schooling by creating immediate income opportunities that compete directly with education.

Table 6. Trend relationship analysis.

Livelihood Activity	Composite Mean	Attendance (Seasonal %)	Completion Rate (%)	Direction Relationship	of
Gold Mining	2.61	52%	70.3	Negative	
Timber Extraction	2.60	52%	70.3	Negative	
Agricultural Production	2.87	52%	70.3	Strong Negative	

Source: Field Survey, 2026.

5.6 School Attendance and Retention Patterns during Mining and Farming Seasons

Table 7 and 8 present the attendance, retention/completion checklist data. The school attendance checklist data further corroborate the questionnaire findings by providing objective evidence of how livelihood activities affect youths' educational participation. As presented in Table 6, average school attendance across the three sampled schools ranged between 61% and 68%, indicating generally moderate participation. However, attendance dropped substantially during mining and farming seasons, with values declining to 52%, 55%, and 49% for Technical College Agoi Ekpo, Tekowa Comprehensive Secondary School, and Community Secondary School Agoi Ibami respectively. In contrast, attendance levels increased markedly during non-season periods, reaching 76%, 81%, and 73%.

This sharp seasonal variation suggests that gold mining, timber extraction, and agricultural production exert strong competing demands on youths' time, thereby disrupting regular school attendance. The pattern aligns closely with respondents' perceptions reported earlier, particularly concerning school absenteeism, lateness, and withdrawal for farming and mining activities. The findings indicate that youths' educational participation in Agoi communities is highly sensitive to livelihood cycles, reinforcing the argument that economic survival strategies significantly shape schooling behaviour. Similarly, retention and completion checklist data reveal considerable dropout levels across the schools. While completion rates ranged from 66.7% to 72.6%, dropout proportions remained notable, particularly in Community Secondary School Agoi Ibami, where 33.3% of enrolled students failed to complete schooling. These figures provide empirical support for earlier questionnaire results indicating that participation in mining, timber extraction, and farming increases the likelihood of school dropout. Collectively, these findings confirm that livelihood activities in Agoi communities pose structural barriers to sustained educational participation among youths.

Table 7. Attendance checklist data.

School	Avg. Attendance (%)	Mining/Farming Season (%)	Non-season (%)
Technical College Agoi Ekpo	64%	52%	76%
Tekowa Comp. Sec. School	68%	55%	81%
Community Sec. School Agoi Ibami	61%	49%	73%

Source: School Records (2026).

Table 8. Retention / Completion checklist data.

School	Enrolled JSS1 (2021)	Still in School (2024)	Dropped Out	Completion Rate (%)
Technical College Agoi Ekpo	120	86	34	71.7
Tekowa Comp. Sec. School	135	98	37	72.6
Community Sec. School Agoi Ibami	165	110	55	66.7

Source: School Records (2026).

6. Discussion

The findings of this study are broadly consistent with, yet in some respects extend, the existing literature on livelihood activities and educational participation. Like [12] in Ghana and [13] in Nasarawa State, Nigeria, we find that mining activities correlate with reduced school attendance and increased dropout risk. However, our data reveal a more nuanced pattern: absenteeism is not the primary mechanism; instead, fatigue-driven disengagement and gradual

withdrawal are dominant pathways a distinction with practical implications for school-based monitoring systems. For timber extraction, our findings extend the work of [29] from forest-proximate communities in Pakistan to the West African context, confirming that even non-mining forest-based activities impose educational trade-offs through seasonal labour demands. Notably, and unlike some prior studies [30], we find that timber activities do not significantly reduce youths' interest in educational participation, suggesting that motivational and structural barriers to schooling should be addressed separately in intervention design. The Agoi context adds specificity to these patterns. The 2024 discovery of gold in the region has introduced a new, highly visible income opportunity that directly competes with schooling for male youths in particular. Simultaneously, the cultural significance of yam cultivation including the 'ladoo' celebration of harvest excellence embeds agricultural participation deeply in community identity, making it difficult to frame farm labour as simply an economic barrier to education. Any effective policy response must therefore engage community values and livelihood realities rather than treating them as obstacles to be overcome.

7. Conclusion

This study makes an original empirical contribution by simultaneously examining three resource-based livelihood activities gold mining, timber extraction, and agricultural production (cocoa and yam) and their combined effects on youths' educational participation in a single rural community context. The evidence reveals a structural pattern in which household economic survival imperatives systematically override educational commitments, constraining long-term human capital formation in ways that cannot be attributed to any single sector alone. Beyond the Agoi context, the findings speak to a broader development dilemma facing resource-dependent rural communities across sub-Saharan Africa: the very activities that sustain household welfare in the short term are those that most significantly undermine the educational investments required for long-term poverty reduction. This tension captured theoretically by the interplay of HCT and CLT calls for integrated rather than siloed policy responses. The study therefore recommends: (1) Conditional cash transfer and scholarship programmes targeted specifically at households engaged in mining, timber, and farming, to offset the opportunity cost of keeping children in school; (2) Strengthened regulatory enforcement of child labour legislation within artisanal mining sites and timber extraction zones, supported by community-based monitoring involving traditional leaders; and (3) The integration of school-compatible vocational training and livelihood diversification into secondary education curricula, providing youths with income pathways that do not require abandoning formal education. Future research should examine gender-differentiated effects of these livelihood activities, as well as the long-term educational and economic trajectories of youths who remain in school versus those who withdraw.

8. Recommendations

Drawing on the empirical evidence generated by this study, the following policy and practice-oriented recommendations are proposed:

- (1) Targeted Educational Incentive Schemes: Governments and development partners should implement conditional cash transfers, scholarships, and bursary schemes targeted at youths from mining, logging, and farming households. Such interventions can offset the opportunity costs of schooling, promote sustained attendance, and discourage premature entry into income-generating activities.
- (2) Strengthening Regulatory Oversight of Youth Labour: Regulatory agencies should intensify monitoring and enforcement of child labour and school attendance legislation, particularly within artisanal mining sites, timber extraction zones, and farming settlements. Community-based surveillance mechanisms, involving traditional leaders and civil society groups, should be institutionalized to ensure compliance and enhance accountability.
- (3) Livelihood Diversification and Youth Skill Development: Structured vocational training, apprenticeship schemes, and entrepreneurship development programmes should be integrated into secondary education curricula to provide youths with alternative, school-compatible income pathways. This approach would reduce dependence on hazardous and education-disruptive livelihood activities while enhancing employability and economic resilience.

Informed Consent

Informed consent was obtained from all individual participants included in the study.

Conflict of Interest

No conflict of interest is declared by the authors.

Generative AI statement

The authors declare that no Gen AI was used in the creation of this manuscript.

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