The Effect of Parental Economic Status on Students' Academic Performance in Public Day Secondary Schools in Busia County, Kenya

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Abstract- ***This study examined the effect of parental economic status on students' academic performance in public day secondary schools in Busia County, Kenya. A cross-sectional survey design involved 355 Form 4 students from 9 randomly selected schools. Data was analyzed using correlation and regression analysis with SPSS version 25. The study revealed a significant positive correlation ($r = 0.703$, $p < 0.001$) between parental economic status and academic performance. Regression analysis showed that economic status explained 83.1% of variance in academic performance ($R^2 = 0.831$). Key findings: 75.2% of households earned below KSh 10,000 monthly, 67% of household heads had primary education or less, and the standardized coefficient ($\beta = 0.754$) indicated strong economic influence on academic outcomes. Parental economic status significantly influences academic performance. Targeted interventions addressing economic disadvantage could substantially improve educational outcomes.***

Indexed Terms- ***Parental economic status, academic performance, socio-economic factors, secondary education, Busia County, Kenya***

I. INTRODUCTION

Education serves as a fundamental catalyst for individual and national development, with academic performance determining students' future opportunities. In Kenya, rural areas face significant socio-economic constraints that impact educational outcomes. Busia County exemplifies these challenges, with persistent underperformance in public day secondary schools.

The Kenya Certificate of Secondary Education (KCSE) results for Busia County (2016-2023) reveal concerning trends, with Teso North Sub-County achieving a mean score of 3.365, significantly below the county average of 3.9125. Understanding how parental economic status influences these outcomes is crucial for developing targeted interventions.

Parental economic status encompasses household income, parental education, occupation, land ownership, and housing conditions. These factors collectively determine families' capacity to support children's educational endeavors through resource provision, educational materials, and conducive learning environments.

This study aimed to establish the effect of parental economic status on students' academic performance in public day secondary schools in Teso North Sub-County, Busia County, Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Framework

The Education Production Function (EPF) theory, developed by James Coleman (1966), provides the theoretical foundation. EPF demonstrates how various inputs, including family socio-economic characteristics, affect student achievements. The theory posits that educational outcomes result from interactions between multiple inputs, with parental education, occupation, income, and asset ownership serving as key predictors.

2.2 Economic Status and Academic Achievement

Research consistently demonstrates strong associations between family socio-economic status and academic performance. Liu et al. (2022) found that family SES is the main factor influencing

academic achievement across different contexts. Families with higher SES can afford essential educational resources including books, technology, tutoring, and conducive study environments (Attanasio et al., 2022).

Muhammad et al. (2019) established that parental education positively contributes to children's academic achievement through direct academic assistance and maintained educational expectations. Kumaravel et al. (2022) confirmed that low family income negatively impacts academic performance, affecting immediate educational needs and long-term educational choices.

III. METHODOLOGY

3.1 Research Design and Location

A cross-sectional survey design was employed in Teso North Sub-County, Busia County, Kenya. The area covers 236.8 km² with a population of 117,947, characterized by subsistence farming and cross-border trade.

3.2 Sampling and Participants

The target population included 4,665 Form 4 students from 31 public day secondary schools. Using the Yamane formula, 355 students were sampled from 9 randomly selected schools (30% of total schools). Simple random sampling selected schools, while purposive sampling was used for key informants.

3.3 Data Collection and Analysis

Data collection utilized student questionnaires with 5-point Likert scales, focus group discussions with parent representatives, and document analysis. Analysis employed SPSS version 25 for descriptive statistics, correlation analysis, and multiple regression. The regression model was: $Y = \beta_0 + \beta_3 k_3 + \varepsilon$, where Y = academic performance, k_3 = household economic status.

3.4 Validity and Reliability

Content validity was ensured through supervisor review. Reliability testing yielded Cronbach's alpha of 0.788, indicating acceptable reliability. Ethical approval was obtained from Kibabii University and NACOSTI.

IV. RESULTS

4.1 Demographic Characteristics

The study achieved 94.3% response rate (351/355 questionnaires). Respondents comprised 60.7% males and 39.3% females, indicating a 21.4% gender gap suggesting barriers to female education. Age distribution showed 84.8% between 17-20 years (mean = 18.38, SD = 0.48964), indicating appropriate age progression through secondary school.

4.2 Household Head Characteristics

Table 1 Key Household Head Characteristics

Variable	Category	Frequency	Percentage
Age	30-45 years	108	30.8
	46-60 years	159	45.3
Gender	Male	243	69.0
	Female	105	30.0
Marital Status	Monogamous	229	65.2
	Polygamous	95	27.1
Family Size	6-8 members	170	48.4
	3-5 members	118	33.6

The predominance of male household heads (69%) reflects traditional patriarchal structures, while 27.1% polygamous families suggest resource distribution challenges. Nearly half (48.4%) have 6-8 family members, creating resource strain that limits per-child educational investment.

4.3 Economic Status Indicators

Table 2 Parental Economic Status Distribution

Indicator	Category	Frequency	Percentage
Education	Primary or less	235	67.0
	Secondary+	116	33.0
Occupation	Peasant farmer	169	48.2
	Unemployed	95	27.0
	Formally	57	16.3

	employed		
Income (KSh)	Below 10,000	264	75.2
	Above 10,000	73	20.8
Land	Below 3 acres	291	82.9
	3+ acres	55	15.7
Housing	Basic (semi-permanent/grass)	230	66.0
	Permanent	71	20.0

The economic profile reveals severe constraints: 67% of household heads have primary education or less, indicating limited educational capital. Three-quarters (75.2%) earn below KSh 10,000 monthly, severely constraining educational investment capacity. The predominance of peasant farming (48.2%) and unemployment (27%) reflects limited economic opportunities, while 82.9% own insufficient land for commercial agriculture.

4.4 Correlation and Regression Analysis

Table 3 Correlation Between Economic Status Components and Academic Performance

Variable	Academic Performance (r)	Significance
Educational Level	.703**	.000
Income Level	.681**	.000
Occupation	.542**	.000
House Type	.434**	.000
Land Ownership	.289**	.000

Note. **p < .01

All economic indicators showed significant positive correlations with academic performance, with parental education demonstrating the strongest relationship (r = .703).

Table 4 Regression Analysis Summary

Model	R	R^2	Adjusted R^2	F	Sig.	β	t
Economic Status → Academic Performance	.703	.831	.524	11.200	.000	.754	5.916

The regression model demonstrated exceptional predictive power (R^2 = .831), indicating that parental economic status explains 83.1% of variance in academic performance. The standardized coefficient (β = .754) shows that a one-unit improvement in economic status produces a 0.754-unit increase in academic performance, representing a large effect size.

4.5 Academic Performance Distribution

Analysis of 2024 mock examination results revealed that only 0.5% achieved grade A, while 85.7% scored grade C or below. This distribution correlates with economic disadvantage, where very few students have resources necessary for academic excellence. The concentration in lower grades (47.9% scoring D or E) reflects direct impacts of economic constraints on learning outcomes.

4.6 Qualitative Findings

Focus group discussions revealed multiple pathways through which economic constraints affect education:

Resource Scarcity: Parents reported inability to provide basic educational materials, uniforms, and adequate nutrition. One parent stated: "We don't take breakfast before coming to school. Sometimes we skip lunch because we can't afford three meals a day."

Fee Payment Challenges: Irregular fee payment creates educational disruption with students frequently sent home for arrears. A parent explained: "I have 7 children, 2 in public day schools since I cannot afford boarding fees. I earn KSh 7,000 monthly as a casual laborer, from which I must feed and educate my children."

Transportation Barriers: Economic constraints forced 41.8% of students to walk over 8km daily, creating

fatigue and time constraints that impair academic performance.

CONCLUSION

This study demonstrates that parental economic status significantly influences students' academic performance in public day secondary schools in Busia County, Kenya. The extraordinarily high coefficient of determination ($R^2 = .831$) indicates that economic factors virtually determine academic outcomes, suggesting that merit-based educational advancement is severely constrained by family economic background.

Key findings reveal pervasive economic disadvantage: 75.2% of households earn below subsistence levels, 67% of parents lack post-secondary education, and 82.9% own insufficient land for commercial agriculture. These constraints create multiple barriers to educational success, from basic resource provision to educational support capacity.

The standardized coefficient ($\beta = .754$) indicates that targeted economic interventions could yield substantial educational improvements. The study provides empirical evidence for policy development and intervention design in similar rural contexts.

RECOMMENDATIONS

1. Implement comprehensive scholarship programs targeting families earning below KSh 10,000 monthly
2. Develop community-based income generation initiatives to address subsistence agriculture dependence
3. Establish parental education programs to build educational capital among the 67% with limited formal education
4. Create school feeding programs to address nutritional deficits affecting learning
5. Improve rural infrastructure to support economic diversification and educational access

Future Research: Investigate specific intervention mechanisms, comparative studies across different economic contexts, and long-term effects of economic interventions on educational outcomes.

This research contributes to understanding educational inequality in rural Kenya and provides evidence for comprehensive approaches addressing both economic barriers and systemic factors perpetuating educational disadvantage.

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