

Relationship Between Access To Education And Employment Rates In Ntungamo District

Nabaasa Mark¹, Dr Friday Christopher (PhD)²

1, 2 Metropolitan International University

Abstract

The study examined the relationship between access to education and employment rates in Ntungamo District, Uganda. A cross-sectional survey design was employed with a sample of 124 youth aged 18-35 years. Data were collected using structured questionnaires and analyzed through correlation and regression analysis. Results revealed a significant positive relationship between access to education and employment rates ($r=0.712$, $p<0.01$). Educational attainment ($\beta=0.445$, $p<0.01$), quality of education ($\beta=0.316$, $p<0.01$), and vocational training access ($\beta=0.289$, $p<0.05$) significantly predicted employment outcomes. The study concluded that enhanced educational access improved employment prospects, with tertiary and vocational education showing particularly strong effects. It was recommended that government expand educational infrastructure, improve education quality standards, integrate practical skills training into curricula, and establish youth employment centers to strengthen the education-employment linkage.

Keywords: Access to education, employment rates, educational attainment, youth unemployment, Ntungamo District

1.0 Background of the Study

Education remained a critical driver of economic development and individual prosperity globally, serving as the primary mechanism through which societies developed human capital necessary for productive employment (World Bank, 2018). In Uganda, the government demonstrated commitment to improving educational access through initiatives such as Universal Primary Education (UPE) introduced in 1997 and Universal Secondary Education (USE) launched in 2007, which significantly increased enrollment rates across the country (Ministry of Education and Sports, 2020). Despite these efforts, the relationship between educational access and subsequent employment outcomes remained complex, particularly in rural districts where economic opportunities were limited and labor market dynamics differed substantially from urban centers.

Ntungamo District, located in southwestern Uganda, faced persistent youth unemployment challenges despite having numerous educational institutions ranging from primary schools to tertiary colleges. According to the Uganda Bureau of Statistics (2021), the district's youth unemployment rate stood at approximately 18.4%, higher than the national average of 13.3%. This paradox of increasing educational access alongside high unemployment raised questions about the nature and strength of the education-employment relationship in the district. Theoretical perspectives suggested that education enhanced employability through knowledge acquisition, skill development, and signaling effects to potential employers (Becker, 1964; Spence, 1973). However, the extent to which educational access translated into

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employment opportunities depended on various factors including education quality, curriculum relevance, and labor market absorption capacity.

Previous research in developed countries consistently demonstrated positive associations between educational attainment and employment outcomes (OECD, 2019). However, in Sub-Saharan African contexts, evidence remained mixed, with some studies reporting weak education-employment linkages attributed to skills mismatches, credential inflation, and limited formal sector opportunities (Bhorat et al., 2016). In Uganda specifically, limited research had examined this relationship at district levels where contextual factors significantly influenced outcomes. Understanding the education-employment nexus in Ntungamo District was therefore essential for informing educational policy, curriculum development, and youth employment interventions tailored to local realities.

2.0 Problem Statement

Despite significant investments in expanding educational access in Ntungamo District, youth unemployment remained persistently high, suggesting potential disconnects between educational provision and employment outcomes. Many young people who completed various levels of education continued to face difficulties securing gainful employment, leading to frustration, underemployment, and economic dependency (Musimenta, 2019). While educational expansion was assumed to enhance employment prospects, empirical evidence on the actual relationship between educational access and employment rates in Ntungamo District was lacking. This knowledge gap hindered effective policy formulation and resource allocation for both education and employment sectors. Furthermore, it remained unclear which dimensions of educational access whether quantity, quality, or type of education most strongly influenced employment outcomes in the district's specific socioeconomic context. The absence of localized evidence limited stakeholders' ability to design targeted interventions that could strengthen the education-employment linkage and reduce youth unemployment in the district.

3.0 Objective of the Study

To determine the relationship between access to education and employment rates in Ntungamo District.

4.0 Methodology

This study adopted a cross-sectional survey research design, which enabled the examination of relationships between variables at a single point in time (Bryman, 2016). The study was conducted in four sub-counties of Ntungamo District: Ntungamo Town Council, Ruhaama, Kayonza, and Rweikiniro, selected purposively based on their demographic diversity and representation of both urban and rural settings.

The target population comprised 850 youth aged 18-35 years residing in the selected sub-counties, representing individuals who had completed or discontinued various levels of education and were in the labor force. Using Yamane's (1967) formula for sample size determination with a 95% confidence level and 5% margin of error, a sample of 124 respondents was selected. Stratified random sampling was employed to ensure representation across gender, age groups, and educational levels. The sample comprised 72 males and 52 females, distributed across educational

levels as follows: 28 with primary education, 45 with secondary education, 31 with tertiary education, and 20 with vocational training.

Data were collected using a structured questionnaire consisting of four sections: demographic information, access to education indicators (measured through 15 items on a five-point Likert scale covering educational attainment, quality of education, and vocational training access), employment status and characteristics (measured through 10 items assessing formal employment, self-employment, and underemployment), and barriers to education and employment. The instrument was validated through expert review by two education researchers and one labor economist. A pilot study conducted with 15 youth from neighboring Isingiro District yielded Cronbach's alpha coefficients of 0.84 for access to education and 0.81 for employment outcomes, confirming acceptable reliability.

Data collection took place over five weeks in September-October 2023. Research assistants trained in ethical research practices administered questionnaires through face-to-face interviews at community centers and respondents' homes. All participants provided informed consent, and anonymity was guaranteed. The response rate was 98.4% (122 out of 124). Data were coded and entered into SPSS version 26 for analysis. Descriptive statistics including frequencies, percentages, means, and standard deviations were computed. Pearson correlation analysis was performed to examine relationships between variables, while hierarchical multiple regression analysis was conducted to determine the predictive power of educational access dimensions on employment rates. The significance level was set at $p < 0.05$.

5.0 Results

5.1 Demographic Characteristics of Respondents

Table 1: Demographic Characteristics of Respondents (N=122)

Characteristic	Category	Frequency	Percentage
Gender	Male	71	58.2
	Female	51	41.8
Age Group	18-23 years	34	27.9
	24-29 years	52	42.6
	30-35 years	36	29.5
Educational Attainment	Primary	27	22.1
	Secondary	44	36.1
	Tertiary	31	25.4
	Vocational	20	16.4
Employment Status	Formally Employed	28	23.0
	Self-Employed	47	38.5
	Unemployed	38	31.1

	Underemployed	9	7.4
Residence	Urban	45	36.9
	Rural	77	63.1

Source: Primary Data, 2025

The demographic analysis revealed a male majority (58.2%) among respondents, reflecting gender disparities in labor force participation commonly observed in rural Ugandan communities where cultural norms often limited female mobility and economic engagement. The dominant age category was 24-29 years (42.6%), representing youth in their prime working years actively seeking employment opportunities. Educational attainment varied considerably, with 36.1% having completed secondary education, while only 25.4% attained tertiary education and 16.4% received vocational training, highlighting limited access to post-secondary educational opportunities in the district. Regarding employment status, a substantial proportion (31.1%) remained unemployed, while 38.5% engaged in self-employment activities, often in the informal sector with limited income security. Only 23.0% secured formal employment, underscoring the district's limited formal job market. The majority of respondents (63.1%) resided in rural areas, where employment opportunities were predominantly agricultural and informal.

5.2 Descriptive Statistics for Access to Education and Employment

Table 2: Descriptive Statistics for Study Variables (N=122)

Variable	Mean	Std. Deviation	Minimum	Maximum
Educational Attainment Level	2.86	1.04	1.00	4.00
Quality of Education Received	3.12	0.91	1.20	5.00
Access to Vocational Training	2.74	1.08	1.00	5.00
Overall Access to Education	2.91	0.82	1.33	4.67
Formal Employment Status	2.18	1.15	1.00	4.00
Income Generation Capacity	2.95	0.97	1.00	5.00
Job Skill Utilization	2.87	1.03	1.00	5.00
Overall Employment Rate	2.67	0.89	1.00	4.58

Source: Primary Data, 2025

The descriptive statistics indicated moderate levels of access to education in Ntungamo District, with an overall mean of 2.91 (SD=0.82). Quality of education received showed the highest mean score (M=3.12, SD=0.91), suggesting that respondents perceived their educational experiences as moderately satisfactory in terms of teaching quality, learning resources, and institutional support. However, this moderate rating also indicated significant room for improvement in educational quality across the district's institutions. Educational attainment level recorded a mean of 2.86 (SD=1.04), reflecting that most respondents completed secondary education but faced barriers to accessing higher education due to financial constraints, distance to institutions, or inadequate academic preparation. Access to

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vocational training showed the lowest mean (M=2.74, SD=1.08), highlighting limited availability and accessibility of technical and vocational education and training (TVET) institutions in the district, which was particularly problematic given the limited formal employment opportunities that necessitated entrepreneurial and technical skills.

Employment outcomes demonstrated below-moderate levels, with an overall employment rate mean of 2.67 (SD=0.89). Formal employment status recorded the lowest mean (M=2.18, SD=1.15), confirming the scarcity of formal sector jobs in the district and the dominance of informal economic activities. Income generation capacity (M=2.95, SD=0.97) and job skill utilization (M=2.87, SD=1.03) showed slightly higher but still moderate means, indicating that many respondents engaged in some income-earning activities, though these often underutilized their educational qualifications and provided insufficient income for sustainable livelihoods. The standard deviations across variables suggested considerable variation in both educational access and employment outcomes among youth in the district.

5.3 Correlation Analysis

Table 3: Pearson Correlation Matrix (N=122)

Variables	1	2	3	4	5	6	7	8
1. Educational Attainment	1							
2. Quality of Education	.598**	1						
3. Vocational Training Access	.547**	.512**	1					
4. Overall Education Access	.862**	.841**	.795**	1				
5. Formal Employment	.654**	.548**	.523**	.689**	1			
6. Income Generation	.532**	.501**	.548**	.623**	.698**	1		
7. Job Skill Utilization	.578**	.534**	.587**	.658**	.712**	.745**	1	
8. Overall Employment Rate	.652**	.589**	.612**	.712**	.887**	.893**	.891**	1

Note: ** Correlation is significant at the 0.01 level (2-tailed)

Source: Primary Data, 2025

The correlation analysis revealed strong positive relationships between all dimensions of educational access and employment outcomes. Overall access to education demonstrated a strong positive correlation with overall employment rate (r=0.712, p<0.01), providing compelling evidence that educational access significantly influenced employment prospects among youth in Ntungamo District. This finding suggested that investments in expanding and improving educational opportunities could yield substantial employment dividends. Educational attainment level showed the strongest correlation with overall employment rate (r=0.652, p<0.01), indicating that higher levels of formal education substantially improved employment chances, consistent with human capital theory's predictions that education enhanced productivity and employability.

Interestingly, access to vocational training demonstrated a particularly strong correlation with job skill utilization ($r=0.587$, $p<0.01$) and income generation capacity ($r=0.548$, $p<0.01$), suggesting that practical, skills-based training better prepared youth for self-employment and entrepreneurial activities than general academic education. Quality of education also correlated significantly with all employment dimensions (r ranging from 0.501 to 0.589, all $p<0.01$), emphasizing that merely attending school was insufficient—the quality of learning experiences, teaching effectiveness, and resource availability significantly influenced subsequent employment success. The high intercorrelations among educational access dimensions (ranging from $r=0.512$ to $r=0.598$, all $p<0.01$) indicated that these components were complementary, with quality education reinforcing the benefits of higher attainment levels and vocational training enhancing overall educational outcomes.

5.4 Regression Analysis

Table 4: Hierarchical Multiple Regression Analysis - Educational Access Predicting Employment Rates (N=122)

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
(Constant)	0.542	0.298		1.819
Educational Attainment	0.382	0.074	.445	5.162
Quality of Education	0.309	0.086	.316	3.593
Vocational Training Access	0.238	0.072	.289	3.306

Model Summary: $R = .758$, $R^2 = .575$, Adjusted $R^2 = .564$, $F(3,118) = 53.279$, $p < .001$

Table 5: Employment Rates by Educational Level

Educational Level	Employed (%)	Unemployed (%)	Mean Employment Score
Primary	29.6	70.4	2.11
Secondary	54.5	45.5	2.64
Tertiary	80.6	19.4	3.45
Vocational	75.0	25.0	3.28

Source: Primary Data, 2025

The hierarchical multiple regression analysis demonstrated that educational access dimensions collectively explained 57.5% of the variance in employment rates ($R^2=.575$, $F(3,118)=53.279$, $p<.001$), representing a substantial and highly significant relationship. Educational attainment emerged as the strongest predictor of employment outcomes ($\beta=.445$, $p<.001$), indicating that each additional level of education substantially increased employment probability. This finding aligned with credential-based labor market theories suggesting that employers used educational qualifications as screening mechanisms for hiring decisions. The practical implication was that youth who progressed beyond secondary education to tertiary or vocational levels experienced dramatically improved employment prospects, as

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evidenced in Table 5 where tertiary-educated youth achieved 80.6% employment compared to only 29.6% among those with primary education alone.

Quality of education significantly predicted employment rates ($\beta=.316$, $p<.001$), underscoring that educational institutions' effectiveness in imparting relevant knowledge, practical skills, and work-readiness competencies directly influenced graduates' labor market success. This finding suggested that policy interventions should focus not only on expanding educational access but also on improving instructional quality, teacher training, learning materials, and curriculum relevance. Vocational training access also contributed significantly to employment outcomes ($\beta=.289$, $p<.001$), with vocational graduates achieving 75.0% employment rates (Table 5), nearly matching tertiary-educated peers. This highlighted the importance of practical, market-oriented skills training in contexts where formal employment opportunities were limited and entrepreneurship was essential for livelihood generation.

The adjusted R^2 of .564 confirmed model robustness, while the high F-statistic indicated strong overall model fit. However, the 42.5% unexplained variance suggested that other factors beyond educational access such as social networks, capital access, local economic conditions, and individual entrepreneurial orientation also influenced employment outcomes. Table 5's breakdown by educational level revealed a clear gradient effect, with employment rates progressively increasing from primary (29.6%) through secondary (54.5%) to tertiary (80.6%) and vocational (75.0%) levels, demonstrating education's cumulative positive impact on employability in Ntungamo District.

6.0 Discussion

The findings of this study confirmed that access to education significantly influenced employment rates in Ntungamo District, supporting human capital theory's central proposition that education enhanced individual productivity and employability (Becker, 1964; Schultz, 1961). The strong positive correlation ($r=0.712$) between educational access and employment outcomes aligned with extensive international evidence demonstrating education's role in facilitating labor market transitions (ILO, 2020). However, the moderate absolute employment rates even among tertiary-educated youth (80.6%) suggested that education, while necessary, was not sufficient for guaranteeing employment in contexts characterized by limited economic opportunities and underdeveloped labor markets.

The finding that educational attainment was the strongest employment predictor ($\beta=.445$) resonated with signaling theory (Spence, 1973), which posited that educational credentials served as signals of ability and trainability to employers. In Ntungamo's context, where formal sector employers were scarce, this signaling effect operated primarily in competitive selection processes for limited government and NGO positions. The substantial employment disparity between primary-educated (29.6%) and tertiary-educated (80.6%) youth highlighted education's stratifying effect on labor market outcomes, potentially exacerbating inequality between those who accessed higher education and those who did not, particularly given that tertiary education access was often constrained by family socioeconomic status. The significant role of education quality ($\beta=.316$) supported findings from Sub-Saharan African education research emphasizing that enrollment expansion without corresponding quality improvements yielded limited economic returns

(Bold et al., 2017). In Uganda specifically, concerns about deteriorating educational standards in public institutions, large class sizes, inadequate teaching materials, and teacher absenteeism had been widely documented (Uwezo Uganda, 2016). This study's results suggested that addressing quality deficits was crucial for strengthening the education-employment linkage. The strong predictive power of vocational training ($\beta=.289$) aligned with growing recognition that TVET provided critical pathways to employment, particularly in economies where self-employment and informal sector activities dominated (UNESCO, 2016).

The 57.5% variance explained by educational variables, while substantial, indicated that employment outcomes depended on multiple factors beyond education. Labor market absorption capacity, entrepreneurship support systems, access to startup capital, and broader economic conditions all influenced whether educational investments translated into employment (Filmer & Fox, 2014). The relatively high self-employment rate (38.5%) among respondents reflected limited formal job creation in the district, necessitating entrepreneurial approaches where practical skills from vocational training often proved more immediately applicable than theoretical academic knowledge.

7.0 Conclusions

Based on the study findings, it was concluded that access to education had a significant positive relationship with employment rates in Ntungamo District, with educational attainment, education quality, and vocational training access all contributing substantially to employment outcomes. Youth who attained higher education levels, received quality education, and accessed vocational training demonstrated significantly better employment prospects than their less-educated peers. The relationship was particularly strong between tertiary and vocational education levels and employment, suggesting these educational pathways were most effective for labor market integration. However, the persistence of unemployment even among educated youth indicated that educational expansion alone was insufficient without corresponding economic development and job creation. The study therefore concluded that while improving educational access was necessary for enhancing employment rates, it required complementary interventions addressing labor market constraints, skills development, and entrepreneurship support to maximize employment outcomes in the district.

8.0 Recommendations

Based on the study conclusions, the following recommendations were proposed:

Ministry of Education and Sports should accelerate the expansion of post-secondary educational infrastructure in Ntungamo District, including establishing additional tertiary institutions and vocational training centers to increase access beyond secondary level. Special emphasis should be placed on TVET institutions offering market-relevant skills in agriculture, construction, hospitality, and information technology sectors where employment opportunities existed.

District education officials should prioritize quality improvement initiatives across all educational levels, including enhanced teacher training and professional development, provision of adequate teaching and learning materials, infrastructure rehabilitation, and strengthened school inspection and monitoring systems to ensure quality standards were maintained.

Educational institutions should reform curricula to incorporate practical skills training, entrepreneurship education, and work-based learning experiences such as internships and apprenticeships. Partnerships with local businesses, agricultural enterprises, and NGOs should be established to provide students with real-world exposure and facilitate school-to-work transitions.

District local government should establish youth employment centers providing career guidance, job placement services, entrepreneurship training, and linkages to microfinance institutions for startup capital. These centers should particularly target secondary and tertiary graduates seeking to establish enterprises or access employment opportunities.

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