

The Effects Of Vocational Training On Employment Rates In Ntungamo District

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Abstract

The study examined the effects of vocational training on employment rates in Ntungamo District, Uganda. A cross-sectional survey design was utilized with a sample of 124 respondents comprising both vocational training graduates and non-graduates. Data were collected using structured questionnaires and analyzed through independent samples t-tests, correlation, and regression analysis. Results showed that vocational training significantly increased employment rates, with 78.7% of vocational graduates employed compared to 42.3% of non-graduates ($t=5.842$, $p<0.001$). Training relevance ($\beta=0.398$, $p<0.01$), practical skills acquisition ($\beta=0.347$, $p<0.01$), and duration of training ($\beta=0.265$, $p<0.05$) significantly predicted employment outcomes. The study concluded that vocational training substantially enhanced employability and self-employment capacity among youth. Recommendations included expanding vocational training infrastructure, strengthening industry partnerships for apprenticeships, updating training curricula to reflect market demands, and providing post-training entrepreneurship support and startup capital access.

Keywords: Vocational training, employment rates, technical education, youth employment, skills development, Ntungamo District

1.0 Background of the Study

Technical and Vocational Education and Training (TVET) emerged globally as a critical pathway for developing practical skills necessary for employment and entrepreneurship, particularly in developing economies where formal wage employment opportunities remained limited (UNESCO, 2016). Unlike conventional academic education that emphasized theoretical knowledge, vocational training focused on equipping learners with hands-on skills directly applicable to specific trades and occupations, thereby enhancing immediate employability and income-generation capacity (Agrawal, 2012). In Sub-Saharan Africa, where youth unemployment rates exceeded 20% in many countries, vocational training was increasingly recognized as essential for addressing skills gaps and facilitating labor market integration (African Development Bank, 2019).

Uganda's TVET sector comprised various institutions including technical colleges, vocational training institutes, and community polytechnics offering programs in trades such as carpentry, tailoring, welding, motor vehicle mechanics, hairdressing, and hospitality services. The government demonstrated commitment to vocational education through the Skilling Uganda Strategic Plan (2011-2020) and the Business, Technical, Vocational Education and Training (BTNET) policy, which aimed to increase skilled workforce supply and reduce youth unemployment (Ministry of Education and Sports, 2019). Despite these policy initiatives, the sector faced challenges including inadequate infrastructure, outdated curricula, limited training equipment, insufficient funding, and weak linkages between training institutions and industry, which potentially compromised training quality and labor market relevance.

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Ntungamo District, located in southwestern Uganda, had several vocational training institutions serving youth who either completed or discontinued formal academic education. However, persistent youth unemployment and underemployment in the district raised questions about vocational training's effectiveness in facilitating employment. While anecdotal evidence suggested that vocational graduates experienced better employment outcomes than their non-trained counterparts, empirical validation of this relationship remained limited. Theoretical frameworks including human capital theory (Becker, 1964) and skills development theory (Grubb & Ryan, 1999) posited that vocational training enhanced productivity and employability through competency development. However, the extent to which vocational training influenced employment rates in Ntungamo's specific socioeconomic context required systematic investigation. This study therefore examined the effects of vocational training on employment rates in Ntungamo District, providing evidence to inform TVET policy, program design, and youth employment interventions.

2.0 Problem Statement

Youth unemployment remained a pressing challenge in Ntungamo District, with many young people lacking marketable skills necessary for securing employment or establishing viable enterprises. While vocational training institutions operated in the district offering various skills programs, questions persisted regarding their effectiveness in enhancing employment outcomes. Many youth completed vocational courses but continued facing difficulties obtaining employment or generating adequate income, suggesting potential misalignments between training provision and labor market requirements (Barungi et al., 2018). Furthermore, limited empirical evidence existed on how vocational training influenced employment rates compared to those without such training, making it difficult for policymakers and education planners to assess program effectiveness and prioritize resource allocation. The absence of systematic evaluation of vocational training outcomes hindered efforts to improve program quality, ensure curriculum relevance, and strengthen industry linkages. This study therefore investigated the effects of vocational training on employment rates in Ntungamo District to provide evidence-based insights for enhancing vocational education's contribution to youth employment.

3.0 Objective of the Study

To assess the effects of vocational training on employment rates in Ntungamo District.

4.0 Methodology

This study adopted a cross-sectional survey research design, which enabled comparison of employment outcomes between vocational training graduates and non-graduates at a single point in time (Creswell & Creswell, 2018). The study was conducted in Ntungamo District, specifically targeting four sub-counties: Ntungamo Town Council, Ruhaama, Kayonza, and Itojo, which were selected based on the presence of vocational training institutions and diverse economic activities.

The target population comprised 620 youth aged 18-35 years who had either completed vocational training programs or had not received any formal vocational training but possessed secondary education qualifications. Using Krejcie

and Morgan's (1970) sample size determination table, a sample of 124 respondents was selected and divided into two groups: 61 vocational training graduates and 63 non-graduates. Purposive sampling was employed to identify vocational training institutions (Ntungamo Community Polytechnic, St. Joseph Vocational Institute, and Ruhaama Technical College) from which graduate lists were obtained. Vocational graduates were then selected through simple random sampling from these lists. Non-graduates with comparable demographic characteristics were selected through snowball sampling from the same sub-counties to ensure comparability between groups.

Data were collected using a structured questionnaire consisting of four sections: demographic characteristics, vocational training experiences (for graduates only, including 16 items measuring training relevance, practical skills acquisition, training duration, and quality of instruction), employment status and characteristics (10 items assessing formal employment, self-employment, income levels, and job satisfaction), and perceived employment barriers. For non-graduates, employment-related questions were identical to enable direct comparison. The instrument was validated by three TVET experts and pretested with 15 youth from neighboring Sheema District. Reliability analysis yielded Cronbach's alpha coefficients of 0.86 for vocational training quality and 0.83 for employment outcomes.

Data collection occurred over six weeks from October to November 2023. Trained research assistants conducted face-to-face interviews with respondents at their residences, workplaces, or community centers. Ethical approval was obtained from Ntungamo District authorities, and all participants provided informed consent with confidentiality assured. The response rate was 97.6% (121 out of 124), comprising 59 vocational graduates and 62 non-graduates. Data were entered into SPSS version 26 for analysis. Descriptive statistics including frequencies, percentages, means, and standard deviations were computed. Independent samples t-tests were conducted to compare employment rates between vocational graduates and non-graduates. Pearson correlation analysis examined relationships between vocational training dimensions and employment outcomes among graduates. Multiple regression analysis determined which training characteristics most strongly predicted employment success. Statistical significance was set at $p < 0.05$.

5.0 Results

5.1 Demographic Characteristics of Respondents

Table 1: Demographic Characteristics by Group (N=121)

Characteristic	Category	Vocational Graduates (n=59)	Non-Graduates (n=62)	Total
		n (%)	n (%)	n (%)
Gender	Male	38 (64.4)	36 (58.1)	74 (61.2)
	Female	21 (35.6)	26 (41.9)	47 (38.8)

Age	18-23 years	18 (30.5)	21 (33.9)	39 (32.2)
	24-29 years	26 (44.1)	25 (40.3)	51 (42.1)
	30-35 years	15 (25.4)	16 (25.8)	31 (25.6)
Academic Education	O-Level	41 (69.5)	44 (71.0)	85 (70.2)
	A-Level	18 (30.5)	18 (29.0)	36 (29.8)
Vocational Field	Tailoring/Fashion	16 (27.1)	-	16 (13.2)
	Carpentry/Joinery	14 (23.7)	-	14 (11.6)
	Motor Vehicle	11 (18.6)	-	11 (9.1)
	Hairdressing/Beauty	10 (16.9)	-	10 (8.3)
	Welding/Metalwork	8 (13.6)	-	8 (6.6)

Source: Primary Data, 2025

The demographic analysis demonstrated comparability between vocational graduates and non-graduates, with both groups showing similar gender distributions (vocational graduates: 64.4% male; non-graduates: 58.1% male) and age structures, ensuring that observed differences in employment outcomes could be more confidently attributed to vocational training rather than demographic variations. The majority of respondents (61.2%) were male, reflecting gender patterns in both vocational training enrollment and labor force participation in rural Uganda. The dominant age bracket was 24-29 years (42.1%), representing youth in peak employment-seeking years. Most respondents (70.2%) possessed O-Level education, indicating that vocational training primarily attracted youth who completed secondary education but did not proceed to tertiary academic institutions, often due to financial constraints or academic performance limitations. Among vocational graduates, training fields were diverse, with tailoring/fashion design being most popular (27.1%), followed by carpentry (23.7%) and motor vehicle mechanics (18.6%), reflecting both market demand and traditional vocational training offerings in the district.

5.2 Comparison of Employment Rates Between Groups

Table 2: Employment Status by Group (N=121)

Employment Status	Vocational Graduates (n=59)	Non-Graduates (n=62)	Chi-square	p-value
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	n (%)	n (%)		
Employed	46 (78.0)	26 (41.9)	15.682	<.001
- Formally Employed	18 (30.5)	8 (12.9)		
- Self-Employed	28 (47.5)	18 (29.0)		
Unemployed	13 (22.0)	36 (58.1)		
Mean Employment Score	3.41 (SD=0.95)	2.34 (SD=1.12)	t=5.842	<.001

Source: Primary Data, 2025

The comparison of employment outcomes revealed striking differences between vocational graduates and non-graduates, providing compelling evidence for vocational training's positive effects on employment. Vocational graduates demonstrated significantly higher employment rates (78.0%) compared to non-graduates (41.9%), with the chi-square test confirming this difference was statistically significant ($\chi^2=15.682, p<.001$). This 36.1 percentage point difference represented a near doubling of employment probability for vocational training recipients. The independent samples t-test on mean employment scores further corroborated this finding ($t=5.842, p<.001$), with vocational graduates scoring substantially higher ($M=3.41, SD=0.95$) than non-graduates ($M=2.34, SD=1.12$).

Examining employment types revealed that vocational training particularly enhanced self-employment, with 47.5% of graduates successfully establishing their own enterprises compared to 29.0% of non-graduates. This finding was particularly significant in Ntungamo's context where formal sector jobs were scarce and entrepreneurship represented the primary employment pathway for youth. Vocational graduates also secured formal employment at higher rates (30.5%) than non-graduates (12.9%), suggesting that employers valued vocational credentials and practical skills when making hiring decisions. Only 22.0% of vocational graduates remained unemployed compared to 58.1% of non-graduates, representing a 62% reduction in unemployment probability associated with vocational training.

Table 3: Income and Job Characteristics Comparison

Variable	Vocational Graduates	Non-Graduates	t-value	p-value
	M (SD)	M (SD)		
Monthly Income (UGX '000)	386.5 (142.3)	198.7 (89.6)	8.412	<.001
Job Satisfaction	3.68 (0.84)	2.71 (0.96)	6.105	<.001
Skills Utilization	3.82 (0.79)	2.48 (1.03)	8.234	<.001
Job Security	3.35 (0.91)	2.52 (0.88)	5.176	<.001

Source: Primary Data, 2025

Beyond employment status, Table 3 demonstrated that vocational graduates experienced superior employment quality across multiple dimensions. Their average monthly income of UGX 386,500 was nearly double that of employed non-graduates (UGX 198,700), a highly significant difference ($t=8.412, p<.001$) indicating that vocational skills commanded premium returns in the labor market. Vocational graduates also reported significantly higher job

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satisfaction ($M=3.68$ vs. $M=2.71$, $t=6.105$, $p<.001$), skills utilization ($M=3.82$ vs. $M=2.48$, $t=8.234$, $p<.001$), and perceived job security ($M=3.35$ vs. $M=2.52$, $t=5.176$, $p<.001$). These findings suggested that vocational training not only increased employment probability but also enabled access to better-quality, more satisfying, and economically rewarding employment opportunities.

5.3 Vocational Training Characteristics and Employment Outcomes

Table 4: Descriptive Statistics for Vocational Training Dimensions (n=59)

Training Dimension	Mean	Std. Deviation	Minimum	Maximum
Training Relevance to Market	3.58	0.87	1.67	5.00
Practical Skills Acquisition	3.72	0.81	2.00	5.00
Duration of Training (months)	14.2	5.8	6.0	24.0
Quality of Instruction	3.45	0.93	1.50	5.00
Availability of Equipment	3.21	0.98	1.33	5.00
Attachment/Apprenticeship	2.89	1.12	1.00	5.00

Source: Primary Data, 2025

Among vocational training graduates, training quality dimensions showed moderate to moderately-high levels. Practical skills acquisition received the highest rating ($M=3.72$, $SD=0.81$), indicating that trainees perceived they gained tangible hands-on competencies, which was encouraging given that practical skills formed the core value proposition of vocational training. Training relevance to market demands scored reasonably well ($M=3.58$, $SD=0.87$), suggesting that curricula generally aligned with labor market requirements, though the moderate rating indicated room for improvement in ensuring programs responded to evolving market needs. The average training duration of 14.2 months ($SD=5.8$) fell within typical ranges for certificate-level vocational programs, with variation reflecting differences across trades motor vehicle mechanics and carpentry required longer training periods than hairdressing or tailoring.

Quality of instruction showed a moderate mean ($M=3.45$, $SD=0.93$), highlighting concerns about instructor competence, teaching methodologies, or student-trainer ratios that warranted attention from training institutions. Availability of equipment and tools scored lower ($M=3.21$, $SD=0.98$), reflecting resource constraints that plagued many vocational training institutions in rural Uganda, where inadequate equipment limited hands-on practice opportunities and potentially compromised skill development. Most concerning was the low score for attachment/apprenticeship opportunities ($M=2.89$, $SD=1.12$), indicating weak linkages between training institutions and industry partners. This gap was problematic because workplace-based learning provided essential exposure to real work environments, industry standards, and employment networking opportunities that classroom training alone could not replicate.

5.4 Correlation and Regression Analysis

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Table 5: Correlation Between Training Dimensions and Employment Outcomes (n=59)

Training Dimension	Employment Status	Monthly Income	Job Satisfaction	Skills Utilization
Training Relevance	.612**	.587**	.543**	.621**
Practical Skills	.634**	.598**	.612**	.689**
Training Duration	.487**	.512**	.398**	.451**
Quality of Instruction	.556**	.531**	.598**	.567**
Equipment Availability	.478**	.489**	.467**	.512**
Attachment/Apprenticeship	.589**	.612**	.534**	.598**

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

Source: Primary Data, 2025

The correlation analysis revealed that all vocational training dimensions were significantly positively associated with employment outcomes. Practical skills acquisition showed the strongest correlations with employment status ($r=.634$, $p<.01$) and skills utilization ($r=.689$, $p<.01$), confirming that hands-on competency development was central to vocational training's employment effects. Training relevance also demonstrated strong associations across all employment indicators (r ranging from .543 to .621, all $p<.01$), underscoring the importance of aligning curricula with actual market demands programs that taught skills sought by employers or needed for entrepreneurship yielded better employment results. Attachment/apprenticeship opportunities, despite their low availability, showed substantial correlations with monthly income ($r=.612$, $p<.01$) and employment status ($r=.589$, $p<.01$), suggesting that graduates who secured workplace attachments gained competitive advantages through practical experience and potential employer networking.

Table 6: Multiple Regression Analysis - Training Characteristics Predicting Employment Success (n=59)

Predictor	B	Std. Error	Beta	t	Sig.
(Constant)	0.687	0.334		2.057	.045
Training Relevance	0.435	0.098	.398	4.439	.000
Practical Skills Acquisition	0.407	0.105	.347	3.876	.000
Training Duration	0.044	0.015	.265	2.933	.005
Quality of Instruction	0.189	0.092	.186	2.054	.045
Attachment/Apprenticeship	0.142	0.078	.167	1.821	.074

Model Summary: $R = .781$, $R^2 = .610$, Adjusted $R^2 = .573$, $F(5,53) = 16.587$, $p < .001$

Source: Primary Data, 2025

The multiple regression analysis demonstrated that training characteristics collectively explained 61.0% of employment success variance among vocational graduates ($R^2=.610$, $F(5,53)=16.587$, $p<.001$), representing a strong predictive model. Training relevance emerged as the strongest predictor ($\beta=.398$, $p<.001$), indicating that programs

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closely aligned with labor market needs substantially enhanced employment outcomes. This finding had important implications for curriculum development and industry needs assessment. Practical skills acquisition was also a significant strong predictor ($\beta=.347$, $p<.001$), confirming that effective hands-on training directly translated into employability. Interestingly, training duration showed significant predictive power ($\beta=.265$, $p<.01$), suggesting that longer programs allowed more comprehensive skill development and mastery, though this needed balancing against opportunity costs for trainees.

Quality of instruction significantly predicted outcomes ($\beta=.186$, $p<.05$), albeit with smaller effect size, emphasizing that competent, well-trained instructors enhanced learning effectiveness and employment preparedness. Attachment/apprenticeship, while showing borderline significance ($\beta=.167$, $p=.074$), demonstrated potential importance that was likely constrained by limited availability only graduates fortunate enough to access attachments benefited, suggesting that expanding such opportunities could substantially enhance overall program effectiveness. The adjusted R^2 of .573 confirmed model robustness, while the remaining 39% unexplained variance indicated that post-training factors such as job-search strategies, social networks, startup capital access, and local economic conditions also influenced employment success beyond training characteristics alone.

6.0 Discussion

This study's findings provided robust evidence that vocational training significantly enhanced employment rates in Ntungamo District, with vocational graduates achieving 78.0% employment compared to 41.9% among non-graduates. This 36.1 percentage point difference represented one of the strongest effects documented in vocational training evaluation literature from developing countries, exceeding effect sizes reported in similar studies from Kenya (Hicks et al., 2011) and Ghana (Palmer, 2009). The results strongly supported human capital theory's prediction that skills investment enhanced productivity and employability (Becker, 1964), while also aligning with capabilities approach perspectives that emphasized how skill development expanded individuals' freedoms and opportunities for meaningful work (Sen, 1999).

The particularly strong effect on self-employment (47.5% of graduates versus 29.0% of non-graduates) resonated with evidence from across Sub-Saharan Africa showing that vocational training facilitated entrepreneurship in contexts where formal employment opportunities were limited (African Development Bank, 2019). Unlike academic education that often oriented youth toward wage employment expectations, vocational training imparted immediately applicable skills enabling enterprise establishment with relatively modest capital requirements. A trained tailor, carpenter, or mechanic could commence income generation with basic tools and workspace, bypassing dependency on scarce formal sector jobs. The doubling of average monthly income among vocational graduates (UGX 386,500 versus UGX 198,700) demonstrated vocational skills' substantial economic returns, supporting findings that TVET graduates earned significantly more than comparable non-graduates (Aslam et al., 2012).

The strong predictive power of training relevance ($\beta=.398$) underscored the critical importance of labor market-responsive curriculum development. Vocational programs succeeded when they taught skills actually demanded by employers or viable for self-employment in local contexts. This finding aligned with persistent critiques of many TVET systems in developing countries for offering outdated curricula disconnected from evolving market needs (Eicker & Haseloff, 2018). In Ntungamo's agricultural and small-town economy, vocational programs in tailoring, carpentry, motor vehicle repair, and hospitality aligned well with existing market opportunities, explaining their effectiveness. However, the moderate training relevance score ($M=3.58$) suggested ongoing challenges in curriculum updating and industry consultation that required strengthening.

The significance of practical skills acquisition ($\beta=.347$) validated the competency-based training approach emphasizing hands-on learning over theoretical instruction. However, the moderate equipment availability score ($M=3.21$) indicated resource constraints that potentially limited practical training quality a common challenge in resource-poor settings where institutions struggled to maintain modern, adequate equipment stocks (Oketch, 2007). The low attachment/apprenticeship availability ($M=2.89$) represented a critical gap, as workplace-based learning was widely recognized as essential for bridging school-to-work transitions and ensuring training reflected actual workplace requirements (ILO, 2012). Strengthening industry partnerships for apprenticeship placements represented a high-priority improvement area with potentially substantial impact on employment outcomes.

7.0 Conclusions

Based on the study findings, it was concluded that vocational training had significant positive effects on employment rates in Ntungamo District. Vocational training graduates experienced substantially higher employment rates, earned significantly higher incomes, and reported better job satisfaction and skills utilization compared to non-graduates with similar demographic characteristics. The employment-enhancing effects operated through multiple mechanisms including practical skills acquisition that enabled self-employment, credentialing that facilitated formal employment access, and enhanced productivity that commanded higher wages. Training relevance to market demands, practical skills acquisition quality, and training duration emerged as the most critical determinants of employment success among vocational graduates. However, challenges persisted regarding equipment availability and industry attachment opportunities, which limited training effectiveness and employment outcomes for some graduates. The study therefore concluded that while vocational training represented a highly effective intervention for enhancing youth employment in Ntungamo District, maximizing its impact required continued improvements in training quality, market responsiveness, and industry linkages.

8.0 Recommendations

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

District Local Government and Ministry of Education should prioritize expansion of vocational training infrastructure in Ntungamo District, establishing additional vocational institutes in underserved sub-counties and increasing

enrollment capacity in existing institutions to accommodate more youth seeking practical skills training as an alternative to academic education pathways.

Vocational training institutions should strengthen curriculum relevance through regular tracer studies tracking graduate employment outcomes, systematic industry needs assessments identifying emerging skill demands, and establishment of institutional-level advisory committees involving local employers, entrepreneurs, and industry representatives to guide program development and updating.

Training institution management should invest in modernizing workshop equipment and training tools, potentially through partnerships with equipment suppliers, donor organizations, or cost-sharing arrangements with industries that could benefit from skilled workforce availability. Priority should be given to ensuring adequate equipment-to-student ratios enabling sufficient hands-on practice for all learners.

TVET institutions and district commercial offices should develop structured industry partnership frameworks facilitating apprenticeship and attachment placements for all trainees. This could include formalizing relationships with local businesses, creating apprenticeship databases, providing incentives to enterprises hosting trainees, and integrating mandatory industrial attachments into all vocational programs.

Financial institutions and microfinance organizations should design specialized loan products for vocational training graduates seeking to establish enterprises, offering preferential interest rates, flexible repayment terms, and modest collateral requirements. Linkages between training institutions and financial service providers should facilitate graduate access to startup capital necessary for translating skills into viable businesses.

References

African Development Bank. (2019). *African economic outlook 2019: Integration for Africa's economic prosperity*. AfDB.

Agrawal, T. (2012). Vocational education and training in India: Challenges, status and labour market outcomes. *Journal of Vocational Education and Training*, 64(4), 453-474.

Aslam, M., Kingdon, G., De, A., & Kumar, R. (2012). Economic returns to schooling and skills: An analysis of India and Pakistan. *Education Economics*, 20(2), 139-152.

Barungi, M., Ochieng, D., & Nahamya, E. (2018). Skills development for youth employment in Uganda: From policy to practice. *African Journal of Economic and Management Studies*, 9(4), 454-470.

Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago Press.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.

Eicker, F., & Haseloff, G. (2018). Technical and vocational education and training in Sub-Saharan Africa: Current situation and development. *International Journal for Research in Vocational Education and Training*, 5(3), 194-223.

Grubb, W. N., & Ryan, P. (1999). *The roles of evaluation for vocational education and training: Plain talk on the field of dreams*. International Labour Office.

Hicks, J. H., Kremer, M., Mbiti, I., & Miguel, E. (2011). *Vocational education voucher delivery and labor market returns: A randomized evaluation among Kenyan youth*. Report for Spanish Impact Evaluation Fund, Phase II.

International Labour Organization. (2012). *Overview of apprenticeship systems and issues*. ILO.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.

Ministry of Education and Sports. (2019). *Skilling Uganda: Business, technical, vocational education and training (BTJET) strategic plan 2020-2025*. Government of Uganda.

Oketch, M. O. (2007). To vocationalise or not to vocationalise? Perspectives on current trends and issues in technical and vocational education and training (TVET) in Africa. *International Journal of Educational Development*, 27(2), 220-234.

Palmer, R. (2009). Skills development, employment and sustained growth in Ghana: Sustainability challenges. *International Journal of Educational Development*, 29(2), 133-139.

Sen, A. (1999). *Development as freedom*. Oxford University Press.

UNESCO. (2016). *Strategy for technical and vocational education and training (TVET) 2016-2021*. UNESCO.