

# Association Of Quality Leadership With Educational Outcomes In Technical And Vocational Education And Training Colleges In Uganda

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**Abstract:** *The aim of quality assurance practices in educational institutions is to enhance the outcomes of any education system. This study focused on assessing the association of quality leadership with educational outcomes in public TVET colleges in Uganda. A cross sectional survey design and stratified random sampling with a lottery approach were used. A closed-ended questionnaire was used to collect data from 102 trainers, and was analysed using SPSS version 25 to generate both zero-order correlations and regression results. The findings show that quality leadership is important (Grand mean=3.7693, SD=.59219), and was reflected in the high awareness of the vision, mission, objectives and values of the college (mean=4.1528, SD=.92933) by respondents. The correlation analysis revealed a significant positive association between leadership and educational outcomes ( $r=0.764$ ,  $P<0.01$ ). It also revealed a significant positive leadership influence on educational outcomes (Beta=0.764,  $P<0.01$ ). Regression analysis revealed that quality leadership accounted for 57.8% of the variation in educational outcomes. The study concluded that effective leadership is vital for improving educational outcomes in public TVET colleges in Uganda. The study recommends enhanced collaborative and participatory engagements with college stakeholders; adherence to established policies, strategies and regulations; establishing effective quality assurance mechanisms and frameworks such as periodical self-assessments, for continuous improvement and enhancement of quality outcomes. This study informs practical application of quality leadership to enhance educational outcomes in public TVET colleges in Uganda.*

**Keywords:** *Completion Rate; Education Outcomes; Employability Skills; Public TVET Colleges; Quality Leadership;*

## I. INTRODUCTION

The aim of quality assurance in educational institutions is to enhance the outcomes of any education system. Technical Vocational Education and Training (TVET) system, is designed to provide the population with knowledge and skills that allow them to successfully secure and retain their jobs as ascertained (UNESCO, 2025). TVET is seen as an alternative to the academic stream of education and is recognized for channelling human capital toward national sustainability (Chamadia & Mubarik, 2021). It is also a crucial part of every education system because it provides valuable skills for

trainees to use in workplaces (Skaar, 2023). According to Boon (2018), and Liu and Liu (2021), companies derive competitive advantage from the knowledge, skills, and abilities (KSAs) possessed by their employees.

Globally, TVET institutions contribute towards economic sustainability and development, poverty eradication, educational policy (Frick, 2018). Quality educational outcomes is a global issue crossing the cultural contexts of educational institutions that require the input of trainers in policy development (Eton et al., 2019). TVET in Uganda like elsewhere on the globe, is also expected to contribute significantly to the economic growth and development of the

country. It is delivered through various categories of institutions, which include Skills Development Centres, Technical Vocational Institutes, and Technical Colleges. Government of Uganda advocates for TVET, and the enrolment at public TVET colleges increased by about 46% from 2018 to 2023 according to a report by Uganda Business and Technical Examination Board (UBTEB, 2024). The increase however, was not in tandem with available resources in public TVET colleges, and trainees hardly accomplished the training requirements in the stipulated period allocated. This is confirmed by the differences in the increased enrolment and the fluctuating completion rates in public TVET colleges (UBTEB, 2024). Limited support services such as career guidance to TVET trainees by institutions (Barigye, 2024), may be one of the causes of such educational outcomes in public TVET college management. Thus, inadequate employability skills and fluctuating completion rates, require additional efforts and attention from all stakeholders of public TVET colleges in Uganda.

The concerns on educational outcomes in the public TVET colleges in Uganda, have remained despite the policy interventions in place to improve the quality of Education training, which include: the Constitution of the Republic of Uganda (GoU, 1995), amended in 2005, and Article XIV Section (b) in particular; the Uganda Vision 2040 (GoU, 2013); the Ugandan Business Technical Vocational Education and Training (BTVET) Act of 2008; the BTVET Strategic Plan (GoU, 2011); the TVET Policy 2019 (GoU, 2019); the Uganda National Human Resource Development (GoU, 2021) and the National Development Plan IV (GOU, 2025). Despite all these policy interventions by the government, regulations for the implementation of QA in TVET institutions, were not made by statutory instruments. The provisions in the TVET Policy, 2019, also required a QA framework to guide the implementation of quality assurance in TVET institutions. This may be due to various challenges in TVET delivery (Okware & Ngaka, 2017), and policy implementation (Kaddu et al., 2023).

## II. LITERATURE REVIEW

Various countries on the globe have put in place strategies, to ensure that the implementation of Quality Assurance (QA) practices in educational institutions is guided accordingly. For example, the Sustainable Development Goals (SDGs) especially SDG4, is to ensure inclusive and equitable quality education and promote lifelong learning for all. However, approximately 267 million youth (15-24 years) on the globe are still not employed, nor in education or training (UNESCO, 2025). In sub-Saharan Africa alone, the youth dominate its population, and unemployment is high (Niyonasenze et al., 2024). The African Vision 2063, is to become an integrated, prosperous, and peaceful continent, driven by its people. According to the Organisation for Economic Corporation and Development (2021), Ethiopia, Kenya, Madagascar, Tanzania, and Uganda, need their TVET institutions to improve their image to become useful. The East African Community (EAC) Vision 2050, identifies a lack of human capital, increasing unemployment, especially among the youth, low levels of

industrialization, and a lack of competitiveness among the vital development concerns (EAC., 2016). The EAC Vision 2050 further lists the anticipated enablers for its successful implementation to include; quality and access to education, skills for emerging development initiatives, and Centres of Excellence in TVET institutions. Various EAC partner states have taken steps to address quality assurance issues, and regulatory bodies to coordinate and regulate TVET, such as; TVET Authority established by the Act of Parliament in Kenya (TVET Act, 2013), Workforce Development Authority in Rwanda to ensure quality training delivery (WDA, 2018), and the National Council for TVET (NACTVET) in the United Republic of Tanzania (NACTVET Act, Cap. 129). In addition to other regional strategies, the EAC TVET Harmonization Strategy, emphasizes a harmonized Quality Assurance Framework among other frameworks under development (EAC, 2023). Despite multiple strategies, little empirical evidence exists on how quality leadership specifically influences educational outcomes in Ugandan TVET colleges. Research by Mutebi and Ferej (2023) shows that in Uganda, coordination and regulation of TVET is still scattered in many ministries and agencies.

Effective leadership is among the good QA practices listed by various scholars (QAHE, 2023); Ramasamy et al., 2021); Dei, 2019), with Ahmad (2023), putting emphasis on personal attributes of leaders in understanding QA. Leadership is inherently strategic and transformational. It involves setting a vision, articulating institutional values, inspiring people toward shared goals, and fostering innovation (Ahmad, 2023; Rafi, 2023). Within the QA framework, leadership drives institutional culture, motivates trainers, and champions policy integration. For instance, Rafi (2023) emphasizes that standardized leadership practices such as clearly defined objectives and stakeholder inclusion can help TVET institutions maintain consistent educational quality across dynamic environments. These ultimately lead to increased completion rates for trainees, and employable skills that industry require. Conversely, poor leadership and management have long been blamed for hindering the realization of educational outcomes in TVET (Wafudu & Kamin, 2021). According to Morris (2013), quality leadership and management has become an increasingly vital aspect of TVET planning and practices over the last decades, and stakeholders must be aware of the standards established to achieve quality educational outcomes. Based on this background, the study focused on assessing the impact of quality leadership on educational outcomes in Ugandan public TVET colleges.

## III. METHODOLOGY

The pragmatic philosophical research paradigm formed the foundation upon which the entire study was conceptualized, designed, and executed. The pragmatic approach was adopted because of its optimal role for mixed methods in educational research (Dube et al., 2024). The study employed a cross-sectional survey design with a quantitative approach. Five colleges purposively selected from fifteen public TVET colleges under the ministry of education and sports in Uganda, participated in the study. Primary data was collected using a

closed-ended questionnaire from a sample of 102 trainers focusing on the period from 2019 to 2024. The items of the questionnaire were adapted from several studies on quality practices (Dei, 2019; IAG-TVET, 2014; QAHE, 2023; Mwangi & Muchanje, 2025). The questionnaire was pretested for both validity and reliability, and the Content Validity Index and Cronbach's Alpha coefficients were above the threshold of 0.7. Proportionate stratified random sampling method was employed to ensure equal representation of all the five TVET colleges considered in the study. Purposive sampling ensured inclusion of regionally diverse institutions while random lottery eliminated selection bias. Data was then analyzed using in SPSS version 25, to generate both correlations and regression results.

#### IV. RESULTS AND DISCUSSION

This section presents the study results on demographic characteristics of respondents, descriptive statistics of quality leadership, correlation results and linear regression results as well as the discussion of findings.

##### DEMOGRAPHIC CHARACTERISTICS OF TRAINER RESPONDENTS

The demographic data of the 102 trainer respondents showed that a significant majority were male (87.3%), and pointing to the male-dominated nature of TVET college trainers. Most trainers were aged between 31 and 40 years (73.6%), indicating an energetic young adult workforce. In terms of academic qualifications, over a half (56.9%) held Bachelor's degrees, 30.4 held Master's degrees, Diploma holders at 8.8%, and a small number with PhDs (3.9%). This academic distribution indicates a fairly well-qualified teaching force at college level, which is essential for maintaining instructional quality and aligning training with occupational standards. Regarding teaching experiences, a combined 66.6% had more than five years in the field, and 33.3% having between 3–5 years of experience. This suggests a generally experienced teaching staff, which was beneficial in the implementation of quality assurance measures, and ably responded to the research questions. These findings imply that quality assurance frameworks in Uganda's public TVET colleges should leverage the academic and professional strength of trainers while also addressing gaps in gender balance, and rejuvenating the workforce through continuous professional development and recruitment of younger trainers.

##### DESCRIPTIVE STATISTICS OF QUALITY LEADERSHIP

This section presents descriptive statistics on quality leadership

Item	Mean	SD
The vision, mission, objectives and values of the college are well known.	4.1528	.92933
There is effective collaboration among trainees and trainers	3.9861	.74101
There is effective collaboration between the college and policymakers.	3.9861	.75978

Management makes informed decisions that align college mission and vision to the needs of trainees	3.9722	1.0066 3
Management makes informed decisions that align college mission and vision to the needs of trainers.	3.9722	.85534
Trainers adhere to procurement procedures in the college when requisitioning for materials.	3.9298	.86983
Policies, strategies and regulations in the college are well known	3.9167	.94571
Trainers embrace mechanisms for effective time management.	3.9014	.63145
There is effective collaboration between the college and community members initiated by trainers.	3.7917	.74941
The college has financial management system with good record keeping that meets stakeholders' needs.	3.7639	.91148
There is a strong management structure that ensures quality assurance in learning	3.6944	.95886
Trainers initiate mechanisms for effective management of technology.	3.6806	.85294
There is effective engagement among trainees, trainers and community members and policymakers.	3.6761	.68740
Trainers initiate mechanisms for effective management of infrastructure	3.6620	.80393
Trainers encourage mechanisms for effective management of human resources	3.6528	.79007
There are mechanisms in place for effective management of financial resources	3.6389	.95395
There is a strong management structure that ensures quality assurance in training	3.5972	1.0162 0
The procurement management procedure is adequate and well known by stakeholders.	3.5915	.97255
There is effective engagement with policymakers by trainers.	3.4306	1.0724 0
There is effective engagement with parents by the trainers.	3.3889	.95763
<b>Grand mean &amp; SD</b>	<b>3.7693</b>	<b>.59219</b>

Source: (Primary Data, 2025)

Table 1: Trainers' Views on the Quality Leadership (N= 102)

Trainers' Views on the leadership Practice in Public TVET Colleges, from 102 respondents is summarized in Table 1. The findings, suggest that respondents generally agreed that leadership plays an important role in supporting QA practices in public TVET institutions. Key item that scored the highest mean value, indicating strong agreement, was the vision, mission, and values of the college being well known (Mean = 4.1528). A mean score of 4.15 on vision and mission awareness, shows alignment between institutional identity and trainer engagement, implying clarity of institutional identity and purpose among trainers, a likely driver of improved outcomes.

Collaboration among trainees and trainers (Mean = 3.9861), and college collaboration with policymakers (Mean = 3.9861), were other aspects that were agreed upon by

respondents. These suggest strong internal and policy-level coordination, and leadership's decisions aligning with both trainee and trainer needs (Mean = 3.9722). The item on adherence to procurement procedures (Mean = 3.9298), indicates that trainers operate within recognized administrative guidelines. Additionally, time management practices (Mean = 3.9014), demonstrate efficient scheduling and planning promoted by trainers. Familiarity with institutional policies and regulations (Mean = 3.9167), suggests well-disseminated governance structures which is good for these colleges. Other items which scored above average (Mean > 3.5) included: Community engagement initiated by trainers (Mean = 3.7917), strong QA structures for learning and training (Means = 3.6944 and 3.5972 respectively), mechanisms for managing resources (infrastructure, finances, technology, human resources) – all scoring between 3.59 and 3.68 respectively.

Areas of concern included: Trainer engagement with policymakers (Mean = 3.4306, SD = 1.07240), and trainer engagement with parents (Mean = 3.3889, SD = 0.95763). These results suggest a moderate perception or uncertainty regarding the extent of trainers' involvement with external stakeholders, particularly parents and policymakers. These areas may require attention of leadership of public colleges, to improve, strengthen accountability, and stakeholder participation in the QA processes. The findings underscore the generally positive role of management in supporting quality assurance practices across public TVET colleges in Uganda. Effective communication of institutional vision, supportive leadership decisions, collaboration among stakeholders, and operational systems contribute significantly to enhanced training quality. However, the relatively neutral ratings on trainer engagement with parents and policy makers, reveal a potential gap in external stakeholder inclusivity, which could limit the broader relevance and effectiveness of QA practices. Strengthening partnerships with parents, employers and policymakers could lead to more community-responsive and sustainable training outcomes.

Correlation results were generated to examine the association between the study variables namely; Quality leadership (independent variable) and educational outcomes (dependent variable). The correlation results are indicated in Table 2.

Variable	Mean	SD	1	2
Quality Leadership (1)	3.7693	.59219	1	.764**
Educational outcomes (2)	3.7514	.54999	.764**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

Source: Primary data, 2025

Table 2: Correlation Results

The findings in Table 2, indicate that there is a significant positive association between quality leadership and Educational Outcomes ( $r=0.764$ ,  $P<0.01$ ). This strong correlation implies a near-proportional relationship; when leadership quality improves, educational outcomes rise significantly.

## INFLUENCE OF QUALITY LEADERSHIP

Regression analysis was conducted to establish the influence of quality leadership on educational outcomes in the public TVET colleges. The findings in Table 3 indicate that quality leadership have a significant positive influence on educational outcomes in public TVET colleges in Uganda (Beta=0.764,  $P<0.01$ ). This implies that every positive unit change in quality leadership results in a significant improvement in education outcomes.

Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta				Zero-order	Partia l	Part	Tolerance	VIF
1	(Constant)	1.077	.273				3.941	.000			
	Quality Leadership	.710	.072	.764	.764	9.908	.000	.764	.764	.764	1.000
	P				.764						
	R <sup>2</sup>				.584						
	Adjusted R <sup>2</sup>				.578						
	Std. Error of the Estimate				.35737						
	F				98.164						
	Sig				.000						
	Sig				.000						

Source: Primary data, 2025

Table 3: Linear Regression Results

Regression results showed quality leadership explain 57.8% of the variance in educational outcomes (Adjusted R<sup>2</sup>=0.578) in public Technical and Vocational Education and Training Colleges in Uganda.

These findings indicate that, better education outcomes are enhanced through various aspects such as well-known vision, mission, objectives, values, Policies, strategies and regulations in the college. Educational outcomes are also enhanced through making informed decisions by management, which are aligned with college mission and vision, and the needs of trainees and trainers. Ensuring effective collaboration and engagement among stakeholders such as trainees, trainers, community members, parents and policymakers is also vital in enhancing education outcomes. Furthermore, the availability of a strong management structure that ensures quality assurance in training and learning also contributes significantly to the education outcomes. It is also confirmed that having mechanisms in place for effective management of financial resources, infrastructure, human resources, technology, and time management are key aspects that enhance education outcomes. In addition, findings show that good financial management systems, adequate record keeping, transparent procurement procedures when requisitioning for materials, were also vital aspects in improving educational outcomes public TVET colleges in Uganda.

The findings of this study are well grounded on the Institutional Theory as it clearly brings out the general understanding of various frameworks, approaches, practices, and techniques adopted by institutions (Hassan, et al., 2019). The findings also are consistent with Kidega et al. (2023), who argue that a well –functioning TVET leadership and management, ensures high standard of administration management through proper establishment and

implementation of rules and regulations. These findings align with Abdullah et al. (2021), but contrast with Nkai (2021), who found weaker influence of leadership in South African TVETs suggesting contextual dependence. Badenhorst and Radile, (2018) also found that good leadership significantly influences educational outcomes. This supports the need for public TVET colleges to enhance the quality of their leadership in all aspects, since it has a crucial role in improving educational outcomes in TVET.

## V. CONCLUSION

The study focused on assessing the association of quality leadership with educational outcomes in public TVET colleges in Uganda. The study confirms that there is a significant positive influence of quality leadership on educational outcomes in Ugandan context. It can be concluded from the study findings that vibrant leadership in public TVET colleges has the potential to improve educational outcomes both in terms of increased completion rate and employability skills. Having a well-known vision, mission, objectives, values, strategies and regulations in the colleges, and leadership making informed decisions, greatly improve the overall education outcomes. In addition, ensuring effective collaboration and partnerships among stakeholders of public TVET colleges in Uganda, is vital in enhancing education outcomes. Furthermore, availability of a strong management structure that ensures quality assurance in training and learning processes, also plays an important role in educational outcomes. It is necessary to have mechanisms in place for effective management of financial resources, infrastructure, human resources, technology, and time management because they are vital in enhancing education outcomes. In addition, the importance of having good record keeping that meets college stakeholders' needs, cannot be overemphasized.

The study concludes that effective leadership is vital for improving education outcomes in public TVET colleges in Uganda. In relation to literature, effective leadership speaks directly to trainees' performance hence leading to improved educational outcomes (Badenhorst & Radile, 2018). In conclusion, leadership that communicates a clear vision, fosters accountability, and builds external partnerships, emerges not only as a quality assurance enhancer, but as a direct enabler of better learning and employability outcomes. One significant limitation of this study lies in its reliance on self-reported data exclusively gathered from TVET trainers. While trainers are key stakeholders in implementing quality assurance (QA) and leadership practices, their responses inherently reflect subjective interpretations, personal biases, and potential social desirability effects. Respondents may unintentionally overestimate the effectiveness of leadership or underreport weaknesses due to institutional loyalty, fear of professional repercussions, or misunderstanding of certain questionnaire items. To mitigate this issue and enrich the validity of future findings, subsequent studies should adopt a triangulated data collection approach, involving multiple stakeholder groups such as learners, employers and policy makers.

## VI. RECOMMENDATIONS

The study recommends the following;

- ✓ Leadership of public TVET colleges should adopt a participatory approach that enhances collaborative engagement with stakeholders, (trainees, trainers, parents and community, employers, and policy makers) to improve the educational outcomes.
- ✓ The college leadership should enforce established policies, strategies and regulations, and ensure that effective quality assurance mechanisms and structures are in place.
- ✓ Routine self-assessment and evaluation of quality assurance should be part of the practices employed by leadership of public TVET colleges to enhance educational outcomes.
- ✓ Effective financial management systems, human resource management and development systems, effective trainee support mechanisms, effective management and utilization of curriculum related infrastructure and equipment should be prioritized by public TVET colleges leadership.
- ✓ TVET college leadership should adapt data-driven leadership monitoring tools tied to educational outcomes, such as real-time dashboards on learner progress and completion.

## REFERENCES

- [1] Abdullah, J. B., Nor, Z. H. M., Abd Hamid, A. H., Harun, N. H., Koswara, E. M. D., Stapa, M. A., & Ahmad, A. S. W. (2021). Development of TVET leadership model among leaders in TVET institutions. *Leadership*, 3(11), 77-92.
- [2] Ahmad, S. &. (2023). The role of leadership in effective implementation of quality assurance mechanisms in higher education: an exploratory case study from Pakistan. *Quality Assurance in Education*, 31(2), 230-246.
- [3] Badenhorst, J. W., & Radile, R. S. (2018). Poor performance at TVET Colleges: Conceptualizing a distributed instructional leadership approach as a solution. *Africa Education Review*, 15(3), 91-112.
- [4] Barigye, D. (20124). Technical Vocational Education and Training in Uganda: Career guidance and practices. *Africa Journal of Career Development*, 6(1), a100. <https://doi.org/10.4102/ajcd.v6i1.100>
- [5] Boon, C. E. (2018). Integrating strategic human capital and strategic human resource management. *The International Journal of Human Resource Management*, 29(1), 34-67.
- [6] Dube, B., Nkomo, D., & Apedile-Theokweng, M. (2024). Pragmatism: An essential for mixed methods research in education. *International Journal of Research and Innovation Social Science*, 8(3). <https://doi:10.147772/IJRISS>.
- [7] Chamadia, S., & Mubarik, M. S. (2021). Assessing the effectiveness of vocational training programs in Pakistan: an experimental study. *Education+ Training*, 63(5), 665-678.

- [8] EAC, S. (2016). *East African Community Vision 2050*. Arusha, Tanzania. Retrieved from [www.eac.int](http://www.eac.int)
- [9] EAC. (2023). *EAC TVET Harmonization Strategy, 2023*. EAC. Arusha, Tanzania: EAC.
- [10] Eton, R., Eton, M., Ogwel, B. P., & Mwosi, F. (2019). Quality assurance policies and instructors' pedagogical planing in vocational institutions in Lango Sub-Region Northern Uganda. *International Journal of Multidisciplinary Research and Development*, 6(2), 22-29.
- [11] Frick, S. (2018). TVET Contributions Toward Education Policy, Economic Sustainability, Development, and Poverty Abatement in a Globalized Economy. *Caribbean Journal of Education*, 40, 240-262.
- [12] GoU. (2011). *The Skilling Uganda Strategy - 2011/2012 - 2021/22*.
- [13] GoU. (2013). *Uganda Vision 2040*.
- [14] GoU. (2019). *The Technical Vocational Education and Training Policy* (1st ed.).
- [15] GoU. (2021). *National Human Resource Development Plan 2020/21- 2024/25*.
- [16] GoU. (2025). *Fourth National Development Plan (NDP IV) 2025/26- 2029/30*.
- [17] Hassan, A., Adhikariparajuli, M., Fletcher, M., & Elamer, A. (2019). Integrated reporting in UK higher education institutions. *Sustainability Accounting, Management and Policy Journal*, 10(5), 844-876.
- [18] IAG-TVET. (2014). Proposed Indicators for Assessing TVET. *Working Document*.
- [19] Dei, J. (2019, December). Assessing Quality Assurance Practices in Institutions of Higher Learnings. *International Journal of Learning, Teaching and Educational Research*, Vol. 18(No.12), 30-45.
- [20] Kaddu, M., Mesa, A. J., & Carson, L. (2023). *Challenges to Policy Implementation in Uganda*. (Report No. UGA - 22107). International Growth Center. <https://www.theigc.org/sites/default/files/202406/Final%20report%20Kaddu%20et%20al%20April%202023.pdf>.
- [21] Kidega., Song, Z. & Haufiku, G. N. D. (2023). TVET and Socio-economic Development in Uganda: Lessons from Chinese TVET. *North American Academic Research*, 11.
- [22] Liu, M. S., & Liu, N. C. (2021). Impact of human capital strategies on employee attitudes and behaviour: a view of internal and external labour markets. *International Journal of Manpower*, 42(5), 756-776.
- [23] Morris, H. (2013). Revisiting Quality Assurance for Technical Vocational Education and Training (TVET) in the Caribbean. *Caribbean Curriculum*, 21, 121-148.
- [24] Mutebi, R. & Ferej, A. (2023). A Review of TVET Quality Assurance Practice in Uganda. *East African Journal of Interdisciplinary Studies*, 6(1). doi:182-196
- [25] Mwangi, B. & Muchanje, P. N. (2025). Management commitment to quality management practices and students' performance in technical and vocational education and training institutions in Kiambu County. *International Academic Journal of Social Sciences and Education (IAJSSE)*, 2(4), 93-107.
- [26] Niyonasenze, S., Nzabalirwa, W., & Nizeyimana, G. (2024). Building Trainer Competencies and Skills for Quality Training Delivery in TVET Schools, Rwanda. *Advances in Physical Education*, 14(3), 94-118.
- [27] Nkai, P. (2021). *Educational leadership towards management efficiency: A case study of TVET colleges*. University of Johannesburg (South Africa).
- [28] OECD. (2021). *Digital Transformation for Youth Employment and Agenda 2063 in East Africa*. Retrieved 07 26, 2023, from African Union Commission, Africa's Development Dynamics 2021: [https://www.google.co.ug/books/edition/Africa\\_s\\_Development\\_Dynamics\\_2021\\_Digit/RwcWEAAAQBAJ?hl=en&gbpv=1&dq=uganda+%2B+TVET&pg=PA178&printsec=frontcover](https://www.google.co.ug/books/edition/Africa_s_Development_Dynamics_2021_Digit/RwcWEAAAQBAJ?hl=en&gbpv=1&dq=uganda+%2B+TVET&pg=PA178&printsec=frontcover)
- [29] Okware, C. J. & Ngaka, W. (2017). *Rationale and Challenges of Technical Vocational Education and Training in Uganda*, 26-44. IGI Global. <https://doi.org/10.4018/978-1-5225-1811-2.Ch002>.
- [30] QAHE. (2023). *Guideline: Best Practices for Quality Assurance in Education and Training Institutions*. <https://www.qahe.org.uk/wp-content/uploads/2023/12/Best-Practices-for-Quality-Assurance-in-Education-and-Training-Institutions.pdf>
- [31] Rafi, S. B. (2023). Leadership with Standardized Practice in TVET Institutions: A Quality System Improvement. *Open Journal of Social Sciences*, 11(5), 145-161. <https://doi.org/10.4236/jss.2023.115012>
- [32] Ramasamy, M., Regel, J., Sharma, H., Rajagopalan, A., & Pilz, M. (2021). Measuring quality in Indian VET institutions: Development steps towards a framework adapted to the national context. *International journal for research in vocational education and training*, 8(4), 44-66.
- [33] Skaar, K. (2023, Feb 13). Assessment for ensuring up-to-date qualification. *Lucubrate Magazine*.
- [34] Uganda Business and Technical Examination Board. (2024). Report on Registration and Completion Rates of Candidates of Diploma in Engineering and Surveying Programs (2018-2023).
- [35] United Nations Educational, Scientific and Cultural Organization. (2025, February 13). Skills for work and life. <https://www.unesco.org/en/skills-work-life/need-know?hub=70288>
- [36] Wafudu, S.J. & Kamin, B.Y. (2021). Realistic quality assurance for technical vocational education and training towards enhanced productivity: literature review. *Ilkogretim Online*, 20(4).
- [37] WDA. (2018). *TVET Quality Management System, Workforce Development Authority*. Rwanda.