

Influence of Availability of Tools and Equipment on Practical Skill Acquisition in Technical Training Institutes in South Rift, Kenya

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Abstract

Technical and Vocational Education and Training (TVET) is key for preparing a skilled workforce by providing practical, hands-on competencies that meet labor market demands. The effectiveness of this training, particularly in Kenya's key sectors, relies heavily on the quality and availability of essential tools and equipment. However, many institutions face a persistent problem of inadequate and outdated equipment, which directly hinders skill acquisition and creates a mismatch between graduate abilities and industry needs. This study examined the influence of training tools and equipment on the acquisition of practical skills in Technical Training Institutes (TTIs) within Kenya's South Rift region. The study was guided by the Functional Context Theory advanced by Thomas Sticht (1975). It applied an interpretivist paradigm and adopted an embedded mixed methods research design. The target population consisted of 1,240 respondents, including trainees, trainers, and administrators from selected technical institutes. A sample of 310 participants was drawn through stratified and simple random sampling to provide adequate representation. Data collection involved structured questionnaires administered to trainees and trainers, as well as interview guides with principals. Quantitative data were analyzed using descriptive statistics in SPSS version 29, while qualitative data were analyzed thematically. Findings of the study revealed significant disparities in the adequacy and modernity of training resources across institutions. While 50.9% of trainees and 58.5% of trainers reported inadequacy of tools, a substantial proportion (49.1% of trainees and 41.5% of trainers) expressed satisfaction, highlighting inconsistency across institutions. Regarding workshop adequacy, 68.1% of trainees affirmed their institutions were well-equipped, compared to evenly split trainer views, suggesting perceptual differences between trainees and instructors. On equipment modernity, 56.5% of trainees and 56.1% of trainers agreed that tools were up-to-date and relevant, though a significant minority highlighted reliance on outdated resources. Importantly, 72.0% of trainees and 86.6% of trainers strongly affirmed that the availability and quality of equipment directly influence skill acquisition, underscoring the consensus that tools are indispensable for bridging theory and practice.

Qualitative findings reinforced these results, with both trainers and trainees emphasizing that adequate tools enhance learning scope, improve demonstrations, and promote mastery of practical competencies. Principals further noted that strained resources, exacerbated by rising enrollments, hindered quality training delivery despite efforts to maintain facilities. The study concludes that while some progress has been achieved in equipping TTIs, gaps in adequacy, equity, and technological modernity persist, threatening consistent training quality. It recommends increased government funding, regular maintenance, strengthened industry partnerships, integration of tools in pedagogy, and robust monitoring frameworks to ensure equitable access to modern, industry-relevant training equipment. These measures are critical for producing competent, work-ready graduates capable of driving Kenya's socio-economic transformation.

Keywords: TVET, training tools and equipment, practical skills acquisition, Kenya

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Introduction

Technical and Vocational Education and Training (TVET) has increasingly been recognized for its vital role in promoting economic growth through the development of practical competencies and industry-ready skills (Seman et al., 2024; Karuhanga & Muhwezi, 2025). Recent scholarship emphasizes that the presence of modern, industry-grade equipment in TVET institutions significantly improves their capacity to deliver employable graduates. For instance, Musyimi (2021) demonstrated that the provision of modern teaching and

learning tools in Kenya's TVET institutions not only enhanced industrial relevance but also improved learners' confidence and employability through workplace-aligned exposure and partnerships with industries. Despite regional frameworks such as the African Union's Agenda 2063 and the Continental Education Strategy for Africa (CESA 16–25), many TVET institutions in sub-Saharan Africa still face structural and financial constraints that limit their ability to provide adequate tools for practical learning (Onderi, Ajowi & Malala, 2014). In Kenya, Muchira et al. (2023) found that although TVET has

gained policy traction, significant gaps persist in translating these policies into practice. Their study highlighted that inadequate resources particularly the absence of modern equipment and limited practical exposure remain core barriers to effective skills acquisition.

Evidence from local empirical studies has reinforced this concern. A study conducted in Meru County found a statistically significant positive relationship between the availability of training resources and the acquisition of practical skills among trainees (Kobia, Kirugua, & Obote, 2025). This confirms that equipping TVET institutions with modern tools is critical for ensuring graduates acquire competencies aligned with labor market demands. In Nairobi County, Okemwa, Ferej, and Wanami (2022) observed that while electronic labs and equipment were available in some TVET institutions, their influence on skill acquisition was diminished by poor management and underutilization. Similarly, Ferej, Tuti, and Kitainge (2024) found a significant correlation between the relevance of workshop facilities to curricula and their actual use in teaching, pointing out that the presence of resources alone is insufficient without effective management practices.

However, in the South Rift region of Kenya, limited empirical studies have explored how the availability and use of training tools influence practical skills acquisition, despite the region's potential to contribute substantially to the national labor force. Previous work in this region has primarily examined procurement planning practices (Chebet, 2024) or the role of TVET in entrepreneurship development (Cheruiyot, 2022), leaving a notable gap regarding the direct impact of training tools on learners' competencies. Against this backdrop, this study sought to examine the influence of tools and equipment on the acquisition of practical skills in TVET institutions in the South Rift region of Kenya. It addresses a crucial

evidence gap by linking the presence and utilization of equipment to training outcomes, thereby offering insights that could inform both institutional practice and national policy in advancing TVET as a driver of employability and economic transformation.

Theoretical Framework

The study was grounded in the Functional Context Theory, a framework developed by Thomas Sticht in 1975. This theory posits that individuals learn most effectively when knowledge and skills are acquired and applied within a meaningful, real-world context. For this research, the theory provided a conceptual lens for understanding the critical link between the training environment specifically the availability and modernity of tools and equipment and the acquisition of practical skills (Martin, 1991). It suggests that a technical trainee's learning is optimized when they can directly apply theoretical knowledge using the same or similar tools they will encounter in the workplace.

The theory's application in this study was to evaluate the extent to which the vocational training environment in the South Rift region served as a functional context. The research argued that a well-equipped workshop with up-to-date, industry-standard tools is not merely a supplementary aid, but an essential component for effective training. A deficit in these resources creates a significant gap between classroom instruction and the practical demands of the job market, thereby hindering the transfer of skills. Therefore, the Functional Context Theory underpinned the study's central argument that the physical resources available for hands-on practice are fundamental to producing competent, job-ready graduates.

Methodology

This study was guided by the interpretivist research paradigm, a framework that

assumes reality is subjective and constructed through social interactions. This approach was chosen because the acquisition of practical skills is a complex, subjective reality influenced by the interaction of various factors. The study used an embedded mixed-methods research design, which involved collecting both quantitative and qualitative data at the same time (Yu & Khazanchi, 2017). This design was chosen to prioritize numerical data while still gaining a more comprehensive understanding through qualitative details.

The study was carried out in Kericho and Bomet counties in Kenya's South Rift region, an area with a largely agricultural economy alongside growing commercial and service sectors. TVET institutions in this region play a key role in linking education to labor market needs. The focus on this area was relevant as little research has examined the influence of training resources on skill acquisition.

The study targeted four public Technical Training Institutes (TTIs) in the South Rift: Sot TTI, Belgut TTI, Kericho Township TTI, and Bureti TTI (currently Kericho National Polytechnic). These institutions were selected because they had the largest student populations in the region, making them representative of the training context. The target population comprised trainers, trainees, and principals from the selected TTIs. Hence, the four institutions had 13,400 trainees, 656 trainers, and 4 principals, giving a total population of 14,060 respondents. Following Mugenda and Mugenda's (2003) guideline, 15 percent of trainees and trainers were sampled, while all four principals were included due to their small number and critical role in providing administrative insights. The resulting sample size was 2,108 respondents: 2,010 trainees, 98 trainers, and 4 principals.

Stratified random sampling was used to select the study participants from the three distinct groups: trainees, trainers, and principals. This technique

ensured that each stratum was adequately represented in the sample. Simple random sampling was then applied within each stratum to give all individuals an equal chance of participation.

Data were collected using questionnaires and interview guides. The questionnaires were designed for trainees and trainers due to their large numbers. They contained both closed-ended questions, structured on a Likert scale for statistical analysis, and open-ended items to capture more detailed views. The instruments were developed around the study objectives, focusing on trainer qualifications, availability of equipment, teaching methods, and trainer adequacy.

Interviews were conducted with principals using an unstructured interview guide. This allowed them to freely express their perspectives on institutional challenges and experiences in managing TVET programs. Unstructured interviews encouraged open conversations, providing richer qualitative data that complemented the quantitative responses. Both instruments were piloted at Konoin TTI, and feedback from respondents and expert reviewers was used to refine them for clarity and accuracy.

Validity was addressed through both face and content validation. Instruments were reviewed by peers and academic supervisors and tested in a pilot study at Konoin TTI to check clarity, language, and appropriateness. Feedback from the pilot led to adjustments that improved the instruments' accuracy in capturing the intended data.

Reliability of the instruments was assessed using the test-retest approach. The questionnaires were first administered to a pilot sample consisting of 30 trainees, 15 trainers, and the principal of Konoin TTI. The same instruments were then re-administered two weeks later to the same group. The resulting correlation coefficients were 0.84 for trainees, 0.89 for trainers, and

0.96 for the principal. Since all the values were above the recommended threshold of 0.70, the instruments demonstrated strong stability and internal consistency. According to Kothari (2014), correlation coefficients above 0.70 indicate that the instrument yields consistent results across different testing periods, making it dependable for full-scale data collection.

Data were processed according to type. Quantitative data from questionnaires were coded and analyzed using SPSS version 29 and analysed using descriptive statistics while qualitative data from interviews and open-ended

questions were transcribed, coded and thematically analyzed.

Results and Discussion

Response Rate

The response rate is the percentage of people who completed a survey or research study out of the total number of people who were asked to participate. Table 1 presents a summary of the issued and returned responses from the sampled institutions.

Table 1: Description of the response rate

S/NO	Institution	Trainees		Trainers		Principals	
		Issued	Returned	Issued	Returned	Issued	Returned
1	Sot TTI	600	527	30	24	1	1
2	Belgut TTI	525	481	20	17	1	1
3	Kericho TTI	210	193	8	8	1	1
4	Bureti TTI	675	540	40	33	1	1
	TOTAL	2010	1741(86.62%)	98	82(83.67%)	4	4(100%)

As shown in Table 1, study recorded high response rates across all categories of respondents. Specifically, trainees had a response rate of 86.62%, trainers 83.67%, and principals 100%. According to Mugenda and Mugenda (2003), a response rate of 50% is adequate for analysis, 60% is good, and 70% or above is considered excellent. Similarly, Sivo et al. (2006) emphasizes that a response rate above 70% enhances the validity and generalizability of study findings. Based on these standards, the response rates achieved in this study can be considered excellent, reflecting strong cooperation from the respondents and reliability of the data collected. The high participation level also reduces the likelihood of non-response bias, which occurs when the views of non-respondents differ significantly from those who participate (Dillman, Smyth, & Christian, 2014).

Characteristics of Respondents

The study sought information on the demographic and academic characteristics of the respondents, which included trainees, trainers, and principals from Technical Training Institutes in South Rift, Kenya. Table 2 presents a summary of the key characteristics of the respondents.

The results indicate that the majority of trainees (80.9%) were aged between 21–25 years, reflecting the youthful nature of TVET enrollment. Gender distribution among trainees was fairly balanced, with males at 52.6% and females at 47.4%. Most trainees were pursuing diploma courses (44.4%), followed by craft certificate programs (38.8%), while only 8.1% and 8.7% were in higher diploma and artisan levels respectively. Courses were diverse, with Electrical and Electronics Engineering (20.9%) and Building and Civil Engineering (15.1%) attracting the highest enrollment.

Table 2: Respondent characteristics

Category	Variable	Groups	Frequency	Percentage (%)
Trainees (n=1741)	Age	Below 20	282	16.2
		21–25	1409	80.93
		Above 25	50	2.87
	Gender	Male	916	52.62
		Female	825	47.38
	Level of Study	Higher Diploma	141	8.1
		Diploma	773	44.4
		Craft	676	38.83
		Artisan	151	8.67
	Courses	Building/Civil Eng.	262	15.05
		Electrical/Electronics	363	20.85
		Food & Beverage	252	14.48
		Mechanical Tech.	82	4.71
		Automotive Tech.	21	1.21
		ICT	140	8.04
		Applied Science	71	4.08
		Hairdressing/Beauty	69	3.96
		Fashion & Design	112	6.43
		Supply Chain Mgmt.	50	2.87
		Other Courses	319	18.32
Trainers (n=82)	Gender	Male	48	58.54
		Female	34	41.46
	Age	Below 30	29	35.37
		31–40	37	45.12
		41–50	11	13.41
		Above 50	5	6.10
	Department	Building/Civil Eng.	11	13.4
		Electrical/Electronics	16	19.51
		Food & Beverage	13	15.85
		Mechanical/Automotive	3	3.67
		ICT	8	9.76
		Agriculture	10	12.20
		Hairdressing/Beauty	8	9.76
		Other Depts.	13	15.85
	Highest Training	Craft	2	2.44
		Diploma	30	36.59
		Degree	47	57.31
		Masters	3	3.66
	Teaching Experience	0–5 yrs	64	78.05
		6–10 yrs	7	8.54
		11–15 yrs	9	10.97
		16–20 yrs	2	2.44
		Above 20 yrs	0	0.00

Principals (n=4)	Gender	Male	4	100
		Female	0	0
	Age	41–50	2	50
		51–60	2	50
	Years of Service	2–5 yrs	3	75
		Above 5 yrs	1	25
		0–2 yrs	0	0

Among trainers, males formed a slight majority (58.5%), and most were aged between 31–40 years (45.1%). Over half of the trainers (57.3%) held a bachelor's degree, while 36.6% had a diploma and a small proportion (3.7%) had postgraduate qualifications. Teaching experience was concentrated in the 0–5 years category (78.1%), suggesting a relatively new teaching workforce in these institutions.

All four principals were male, with ages ranging from 41–60 years. Most had served in their current positions for between two and five years, reflecting leadership that is relatively experienced but not long-tenured.

Influence of Availability of Tools and Equipment on Practical Skill Acquisition

Trainers' Views

To understand trainers' perceptions, they were asked to rate their level of agreement with statements regarding the adequacy, relevance, and modernity of training tools and equipment, as well as their influence on the acquisition of practical skills. A five-point Likert scale was applied, with options ranging from Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), to Strongly Agree (SA). The responses are summarized in Table 3.

Table 3: Trainers' views on the influence of availability of tools and equipment on acquisition of practical skills by trainees

Statements	SD	D	N	A	SA
There is adequate provision of training tools and equipment	12	22	0	36	12
There is well equipped workshop with tools and equipments	12	27	4	29	10
The training tools and equipments are up to date/relevant to the industrial equipment	13	23	0	34	12
The training tools and equipment are technologically modern	9	24	1	35	13
The nature and availability of training tools and equipment influence the acquisition of relevant practical skills	7	3	1	36	35
Total	53	99	6	170	82

From the Table 3, trainers were divided on whether there is adequate provision of training tools and equipment. While 48 trainers (58.5%) believe that the provision is inadequate, 34 trainers (41.5%) feel otherwise. This split suggests that some training centers were struggling with insufficient resources, which adversely affected the quality of education provided. Similar results were

reported by Ojera, Simatwa, and Ndolo (2021), who found that insufficient tools in TVET institutions within the Lake Victoria Region limited hands-on learning, forcing trainees to rely more on theory than practice. Likewise, Mugambi (2016) observed that while some Nairobi-based institutions were well supplied, many others struggled with shortages that

negatively affected the quality of instruction and learner outcomes.

When asked about the state of their workshops, the trainers again presented a mixed view. An equal number of trainers agreed (41 or 50.0%) and disagreed (41 or 50.0%) about whether their workshops are well-equipped with tools and equipment. This parity indicates that while some workshops meet the necessary standards, others do not, likely due to variations in funding or access to resources. Mutembei (2024) noted similar challenges in Meru County, where some TVETs had fully functional workshops while others lacked even basic equipment, creating inequalities in skill acquisition opportunities for trainees.

Regarding the relevance and modernity of the tools and equipment, the majority of trainers responded positively. Forty-six trainers (56.1%) believe that their equipment is up-to-date and relevant to industry standards, while 48 trainers (58.5%) feel that their tools are technologically modern. However, a significant minority of trainers disagreed, which suggests that outdated or less advanced equipment were still in use in some training centers. This discrepancy is concerning as it could hinder the ability of trainers to adequately prepare trainees for the demands of the modern workforce. These findings align with Tessar, Cichecki, and Opiyo (2025), who established that in some Tana River TVET centers, modern equipment was available and supported relevant learning.

A notable point of consensus among the trainers was the influence of the availability and quality of tools on practical skills acquisition. The majority, seventy-one trainers (86.6%), affirmed that the adequacy of tools and equipment directly affected their capacity to deliver effective training. This strong agreement underscores the indispensable role of modern, functional, and industry-relevant equipment in vocational education. Even highly qualified trainers may be

constrained in their instructional delivery if they lack the necessary tools to replicate workplace conditions. This strong consensus resonates with Mugambi (2016), who found that even experienced trainers were constrained in replicating workplace tasks when equipment was lacking or obsolete. The finding also supports Ojera et al. (2021), who reported a positive correlation between workshop utilization and trainees' skill mastery. It reinforces the idea that without adequate, modern, and industry-relevant tools, TVET institutions risk producing graduates who are ill-prepared for the labor market.

Trainees' Views

Trainees were asked to indicate their level of agreement with statements concerning the adequacy, relevance, and technological modernity of training tools and equipment, as well as their influence on the acquisition of practical skills. Responses were recorded on a five-point Likert scale, where Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA) reflected the level of opinion. Table 4 presents a summary of the trainees' responses.

A total of 886 trainees (50.9%) indicated that the provision of tools was inadequate (402 strongly disagreed, 484 disagreed), while 855 trainees (49.1%) expressed satisfaction, agreeing or strongly agreeing that the provision was adequate (536 agreed, 319 strongly agreed). This near parity mirrors the concerns expressed by trainers, who also exhibited divided views on the adequacy of their resources. Similar findings were reported by Mugambi (2016), who observed that in Nairobi County, trainees in well-funded TVET institutions had access to sufficient tools, while those in underfunded institutions struggled with shortages that limited skill acquisition. Likewise, Mutembei (2024) found that in Meru County, resource constraints created inequalities in learners' ability to

practice, leading to uneven graduate competencies.

Table 4: Trainees' views on the influence of availability of tools and equipment on their acquisition of practical skills

Statement	SD	D	N	A	SA
There is inadequate provision of training tools and equipment.	402	484	0	536	319
There is well equipped workshop with tools and equipment.	199	346	10	787	399
The training tools and equipment are up to date/relevant to the industrial equipment.	389	399	0	573	410
The training tools and equipment are technologically modern	316	330	21	524	505
The nature and availability of training tools and equipment influence the acquisition of relevant practical skills	228	218	41	746	508
Summary	1534	1777	72	3176	2141

In terms of whether the workshops are well-equipped, the majority of trainees 1,186 respondents (68.1%) agreed or strongly agreed, indicating that their workshops meet the necessary standards (787 agreed, 399 strongly agreed). In contrast, 545 trainees (31.3%) disagreed (199 strongly disagreed, 346 disagreed), while only 10 (0.6%) remained neutral. This sentiment was more positive compared to the trainers' responses, which were evenly divided. The divergence suggests that trainees, as direct beneficiaries, may perceive the facilities more favorably or perhaps have lower expectations compared to trainers. Ojera, Simatwa, and Ndolo (2021) reported similar trainee optimism in the Lake Victoria Region, noting that although equipment shortages existed, many learners appreciated even partial access as it gave them hands-on exposure that complemented theory.

The relevance and modernity of tools and equipment were also examined. Regarding relevance, 983 trainees (56.5%) agreed or strongly agreed that the tools are up-to-date and aligned with industrial standards, while 788 (45.3%) disagreed (389 strongly disagreed, 399 disagreed).

Similarly, on technological modernity, 1,029 trainees (59.1%) agreed or strongly agreed, while 646 (37.1%) disagreed (316 strongly disagreed, 330 disagreed), and 21 (1.2%) remained neutral. These results indicate that while the majority of trainees perceive their equipment as modern and relevant, a substantial proportion still experience outdated tools. Tessar, Cichecki, and Opiyo (2025) similarly found that while some centers in Tana River County had modernized equipment that enhanced trainee confidence, others relied on obsolete tools, widening the gap between training and actual workplace practices. This aligns with Mugambi's (2016) conclusion that outdated tools undermine graduates' readiness for employment in competitive industries.

The strongest agreement among trainees was seen in their recognition of the critical role that the nature and availability of tools play in acquiring practical skills. An overwhelming 1,254 trainees (72.0%) agreed or strongly agreed (746 agreed, 508 strongly agreed) that proper tools significantly influence their ability to learn and apply practical skills. Only 446 trainees (25.6%) disagreed,

and 41 (2.4%) remained neutral. This closely aligns with trainers' views, suggesting a shared understanding across both groups of the importance of well-resourced training environments. Mutembei (2024) emphasized that modern and relevant training resources enhance employability by equipping graduates with workplace-relevant skills. Similarly, Ojera et al. (2021) showed that proper workshop utilization directly improved skill mastery in engineering programs. These findings reinforce the argument that investment in modern tools is a prerequisite for effective vocational training in Kenya.

Results from the Qualitative Part of the Questionnaire

Further, the trainers and trainees were required to give their opinion on how availability of tools and equipment influence the acquisition of practical skills by trainees. The following are the collected opinions:

"....availability of tools and equipment necessitates acquisition of practical skills"

"....availability of tools and equipment improves the scope of learning in areas of specialty"

"....availability of tools and equipment helps understand the real practice"

"....availability of tools and equipment improves the scope of learning in the areas of specialization"

"....availability of tools and equipment makes training and practical demonstrations easier"

"....availability of tools and equipment saves on time and enable effective learning of skills"

"....availability of tools and equipment helps in gaining more practical knowledge"

"....availability of tools and equipment makes training and practical demonstrations easier"

"....availability of tools and equipment enables trainees to understand how to deal with equipment and machines"

"....availability of tools and equipment enable trainees to put classroom knowledge to practice"

"....availability of tools and equipment aid in the mastery of skills"

"....availability of tools and equipment enhance the ability to handle practicals"

"...availability of tools and equipment enables production of skilled and competent graduates"

Principals Views

Lastly, principals were also interviewed on the adequacy of training equipment and how it influenced the acquisition of skills by the trainees. Concerning the adequacy of the training equipment, the principals indicated that the resources were inadequate due to increased enrollment that had led to the straining of the available tools and equipment. On the issue of how the availability of tools and equipment influenced the acquisition of skills by the trainees, the principals gave the following responses:

"....availability of tools and equipment improves pass rate"

"....good and modern equipment promotes acquisition of skills"

The responses gathered from trainers, trainees, and principals underscore the unanimous recognition of the critical role that the availability of tools and equipment plays in the acquisition of practical skills within vocational training settings. The collective views reflect a shared understanding that without adequate and modern resources, the effectiveness of vocational training programs is significantly compromised. One study by Musyimi (2021) found that the provision of modern teaching and learning equipment in TVET institutions in Kenya strongly correlated with improved academic performance and employability outcomes. Students reported that practical learning periods using up-to-date equipment helped bridge the gap

between theory and practice and enhanced their confidence.

Trainers and trainees alike consistently emphasized that the availability of tools and equipment is indispensable for effective skill acquisition. For instance, they noted that having the necessary tools "necessitates the acquisition of practical skills" and "makes training and practical demonstrations easier." These sentiments suggest that the learning of practical skills is deeply dependent on the presence of appropriate tools, without which the training would be less effective. Mugambi (2016) further reinforced this perspective in a study on training equipment and acquisition of employable skills in Nairobi. The trainees' responses further illustrate that the presence of well-equipped workshops not only improves the scope of learning but also enhances the ability to relate theoretical knowledge to real-world applications. Statements such as "availability of tools and equipment improves the scope of learning in areas of specialty" and "helps understand the real practice" reveal that trainees find these resources essential for bridging the gap between theory and practice. The trainers echoed these views, reinforcing the idea that practical demonstrations become easier and more effective when the right tools are available, ultimately leading to a better mastery of skills. Research by Selina (2020) established that poor infrastructure including insufficient, obsolete, or poorly maintained equipment resulted in graduates lacking hands-on experience, which in turn reduced their competitiveness in the job market. The study further found that adequacy of infrastructure, including tools and workshop facilities, showed a strong positive relationship with the quality of graduates produced.

The principals' concerns about enrollment outpacing resource expansion also echo earlier research. Mugambi (2016) observed that many TVET

institutions in Nairobi were overwhelmed by high student numbers while funding for equipment remained stagnant. As a result, institutions resorted to rationing or sharing of equipment, which reduced access per student and negatively impacted pass rates and skill competence.

Conclusion

The study established that the availability, adequacy, and modernity of tools and equipment play a decisive role in the acquisition of practical skills in Technical Training Institutes within the South Rift region. Trainers, trainees, and principals consistently agreed that well-equipped and technologically updated workshops enhance the scope of learning, bridge the gap between theory and practice, and improve trainees' mastery of industry-relevant competencies. However, concerns emerged regarding the adequacy and equitable distribution of resources, with many institutions struggling to meet the demands of rising enrollment, resulting in inconsistencies in training quality. The findings therefore highlight that while progress has been made in equipping TVET institutions, significant gaps remain in ensuring that all centers have access to modern, relevant, and sufficient training tools. Without deliberate investment and policies to guarantee resource adequacy and uniformity across institutions, disparities in skill acquisition will persist, limiting the employability of graduates.

Recommendations

Based on the findings of this study, the following are the recommendations of the study:

1. The Ministry of Education and the TVET Authority should increase funding to equip all Technical Training Institutes with modern, industry-relevant tools aligned with current technological trends

to better prepare trainees for the labor market.

2. Institutional Principals and Boards of Management should establish and enforce annual maintenance and replacement schedules to keep training equipment functional, safe, and up to date with industry standards.
3. Industry stakeholders, including employers and professional associations, should actively partner with TVET institutions through resource-sharing, equipment donations, and industrial attachment programs to strengthen the link between training and workplace practice.
4. TVET trainers and curriculum developers should deliberately integrate available tools into lesson delivery each training cycle to maximize practical exposure and ensure trainees acquire hands-on, industry-relevant competencies.
5. National and county governments should institute a biennial monitoring and evaluation framework to guarantee equitable distribution and adequacy of training resources across all TVET institutions, thereby minimizing disparities in training quality.

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