

# The Availability of the Physical Facilities and Resources for Technical Training and Skills Acquisition in Vocational Training Centres in Tana River County

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## Abstract

Since vocational education gives young people the knowledge and skills they need to succeed in the workforce, it is crucial for human development. The purpose of this study was to examine the availability and adequacy of physical facilities and resources for vocational training and skills acquisition in the vocational training centers in Tana River County, Kenya. Data were gathered using a descriptive research approach that included both quantitative and qualitative methods. There were nine Vocational Training Centres in Tana River County, with a total of two hundred and fifty trainees. The trainees were chosen at random. Trainees' data was gathered using questionnaires. The SPSS version 26 was used to analyze, code, and critical quantitative data. Pie charts and graphs were used to display the data that had been analyzed. The results of the study showed that the trainees believed academic education was superior and that vocational skills were for failures.

**Keywords:** Physical Facilities, Resource Availability, Resource Adequacy, Vocational Training, Skills Acquisition, Vocational Training Centres.

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## INTRODUCTION

Vocational training is formal, non-formal, and informal, providing trainees with the knowledge and skills required for future employment (UNESCO, 2021). Vocational education aims to improve trainees' knowledge, skills, and comprehension to succeed in their chosen careers (Peters, 2023).

Due to its usefulness, vocational education continues to get a great deal of attention in many different parts of the world. Vocational education is defined by Tum (1996) as an official training program that equips students to work in a particular trade. Vocational education is defined by Van Ark (1992) as a kind of training intended to get students ready for careers in the industrial or commercial sectors. Achieng (2012) defines vocational education as the learning of specialized skills for career advancement or self-employment, such as working in fields like dressmaking, carpentry, masonry, and cookery. This type of training meets both the demands of the community and the individual's needs (Metto, 2016).

The U.N. General Assembly now acknowledges vocational education and training programmes as being crucial to achieving the 2030 Agenda for Sustainable Development Goals (SDGs) (Mayombe, 2023). Operational goal 4.4 of the SDGs, by 2030, will ensure a substantial level of state capabilities of equipping its citizens with vocational skills, employment opportunities, and entrepreneurship due to reduced job opportunities that can be offered by the state (UNESCO, 2021).

Adequate provision of school facilities in line to the students' population is paramount given that the quality of education is affected by the availability or non-availability of physical facilities (Likoko, *et al.*, 2013).

In London, successful teaching and learning took place in school buildings that were safe, clean, quiet, comfortable and healthy (Gurney, 2007). This concurs with Owiye (2005), who stated that provision

of material inputs like staffrooms, computers, classrooms, and toilets are important for the efficiency of education in those institutions. Generally, the state of existing infrastructure is wanting (UNESCO, 2006).

Udofia (2012) noted that there is significant relationship between workshop equipment for training and acquisition of employable skills. Also Umar and Ma'aji (2010) concurs that TVET institutions in Nigeria perform below standards due to non-availability, poor management or utter neglect of the tools & equipment for effective imparting of skills to trainees. In Kenya, Muthaa (2012), revealed that TVET institutions operate with inadequate workshop facilities, which are under equipped. This scenario compromises the ultimate significance of skills acquired as most of the training equipment in these institutions do not match equipment found in industries and business organizations. More so, the TVET policy in Kenya noted that obsolete training equipment has led to poor training quality and acquisition of skills hence mismatch of skills among graduates (GoK, 2012; Nyerere, 2009). Mureithi, (2008) revealed that vocational training centres fail to offer hands on skills due to inadequate training facilities.

In light of this, Bwisa (2014) also observed that, in Vocational training centres, motor mechanics course is instructed using obsolete equipment, non-functional old engine models as well as by instructors without adequate exposure to modern technology. Therefore, modern training equipment need to be provided in the vocational training centres since outdated training equipment hinder trainees from learning modern technologies.

According to Mobegi, (2007), availability of modern and relevant training equipment affects the relevance of employable skills acquired by students. In the Nairobi region, Njoki (2014) uncovered that the majority of TVET institutions possessed sufficient teaching and learning resources, yet teaching facilities lacked proper equipment. Similarly, Njati (2011) investigated the influence of vocational training on rural development in Nyabene District, Kenya, revealing that vocational training centres required adequate infrastructural materials to operate effectively.

Dasmani (2011) affirms that TVET institutions have inadequate training equipment, which are outdated and inferior to those used in industries. This compels TVET instructors to opt for lecture method with limited practical training hence leading to irrelevance of skills acquired by students.

Olelewe (2019) notes that most TVET instructors adopt a lecture-style teaching approach with little practical experience due to inadequate training equipment. This emphasizes the importance of having modern and functional training equipment to facilitate

effective skills development. The lack of practical experience among instructors can hinder the quality of training and skill development among students. Additionally, the TVET policy in Kenya acknowledges that outdated training equipment can lead to poor training quality and skill development, resulting in a mismatch between graduate skills and industry needs (GoK, 2020).

Workshop facilities are essential for hands-on instruction in technical trades, enabling students to advance the skills necessary for their future careers (GoK, 2022). Adequate workshop facilities not only improve student learning but also allow for demonstrations and practices that enhance skill development. According to Jacque, instructional materials, including textbooks, libraries, and learning resource centres, are critical for effective instruction or training and contribute significantly to educational expenditure in developing countries (GoK, 2022).

Mupa and Chinooneka (2015) highlight the challenge of inadequate instructional resources, which often hampers the efficiency of non-formal training. Trainees require access to reference materials and tools to effectively acquire new skills. For example, in learning tailoring skills, a trainee needs access to a sewing machine, threads, measuring tape, bobbin casings, and materials. The availability of these resources is crucial for efficient skill development in vocational training centres.

Despite the importance of vocational education and training, the sector has historically received less financial and human resources compared to other education sectors (Tamrat, 2022). This has led to a lack of modern facilities and equipment in many vocational training centres. The availability of grants plays a crucial role in the ability of training centres to purchase relevant learning tools and equipment. Vocational training centres often rely on outdated facilities inherited from the secondary school system, highlighting the need for investment in modernizing these facilities (Onsomu *et al.*, 2009).

UNESCO (2020) emphasizes the importance of adequate resources, including tools and materials, in vocational training centres. The availability of resources has a direct impact on students' performance in exams and the development of vocational skills. However, a scarcity of library and instructional materials can hinder skill development. Kirui (2022) notes that vocational training centres have suffered from systematic neglect since the colonial period, leading to outdated facilities and equipment. The decentralization of vocational training centers to counties was intended to improve funding and management but has been hampered by budgetary constraints and continued neglect (Kirui, 2022).

Eigen (2021) highlights the disconnect between the insistence of vocational training centers, which is to provide practical skills, and the reality on the ground, where many institutions lack workshops, tools, and equipment for practical training. This gap underscores the need for investment in vocational education infrastructure and resources to ensure that scholars are prepared with the necessary skills for employment.

**METHODOLOGY**

**The Study Area**

The study was conducted in Tana River County, which initially had three vocational training

centers that is Hola, Tumaini, and Maziwa - before devolution. With vocational training centres functions devolved to the counties, the vocational training department boosted the vocational training centres by constructing new operationalized ones. The Study area was Tana River County, specifically in the selected nine vocational centers. The selected training centers for the study were situated within different sub-counties: Galole, Bura, and Tana Delta. Tana River County was selected for this study due to several compelling reasons. Firstly, the county has a unique demographic and socio-economic profile that presents both challenges and opportunities for vocational training.

**Table 3.1: Vocational Training Institutions in Tana River County**

No	Name of the Institutions	Sub-county
1	i. Tarasaa vocational training center ii. Maziwa vocational training center iii. Garsen vocational training center iv. Hurara vocational training center v. Odha vocational training center vi. Kipini vocational training center	Tana delta
2	i. Madogo vocational training center ii. Tumaini vocational training center	Bura Sub- County
3	i. Hola vocational training center ii. Wenje vocational training center	Galole sub-county

**Table 3.2: Checklist on availability of the physical facilities and Resources for Technical training and skills Acquisition in vocational training centers in Tana River County**

Adequacy of the physical facilities	(Strongly Agree (1) Disagree (4)	Agree (2) Strongly Disagree (5)	Neutral (3)
There is not enough provision for physical training resources and equipment.			
There is quality workshop equipment and work benches available.			
The training tools are modern and relevant, providing skills needed to meet market demand.			
The nature and availability of training resources influence the acquisition of vocational skills and equipment			

**Research Design**

A descriptive research design was used for the research assessment. This design was deemed the most convenient as the study aimed at the examining the availability and adequacy of physical facilities and resources for vocational training and skills acquisition. The trainers were asked to score the suitability, quality, and relevance of the training tools in vocational training centres in Tana River County. According to McCombes (2019), a descriptive research study aims to identify if there is or not enough provision of physical training resources and equipment, if there is quality workshop equipment and work benches available, if the training tools are modern and relevant, providing skills needed to meet market demand, if the nature and availability of training resources influence the acquisition of vocational skills and equipment. The descriptive survey

was deemed appropriate since it enabled the study to collect significant data required for generalization.

**Sample Size and Sampling Techniques**

The sample size was determined relative to the target audience, and a combination of stratified random sampling, simple random sampling, and purposive sampling techniques were employed to choose the respondents. Stratified random sampling was used to ensure representation from each vocational training centre by dividing the trainees into strata based on their respective centres. Trainees from each stratum were then randomly chosen for the study to ensure a diverse and representative sample. Simple random sampling was applied to select the specific trainees within each stratum, providing every individual an equal chance of being included in the sample.

Purposive sampling was used to select the Heads of vocational training centres because they were considered key informants with adequate information needed by the researcher. This method ensured that the individuals with the most relevant and comprehensive insights into the factors influencing vocational skills acquisition were included in the study. By using these sampling techniques, the study was able to gather a wide range of data from various stakeholders within the vocational training centres in Tana River County. Yamane's (1967) in McGrath (2020) formula for finite population was used to generate the sample size for trainees in the vocational training centres as described below:

The sample size was determined based on the target audience and calculated using Yamane's (1967) formula for finite populations.

$$nh = n (Nh/N)$$

Where  $nh$  = sample size in stratum  $h$ ,

$Nh$  = population size in stratum  $h$ ,

$h$  = stratum number,

Where  $h = 1, 2, 3, \dots$ ,

$N$  = total population size, and  $n$  is the overall sample size.

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{670}{1 + (670 * 0.05 * 0.05)} = 250$$

trainees..... Equation 3.1

### Data Collection Instruments

Questionnaires were distributed to the intended respondents in order to seek and collect primary data. The questionnaire included open- and closed-ended items and utilized a Likert scale to collect respondents' perceptions and satisfaction. The questionnaires were physically distributed. This approach was chosen as it was less time-consuming, less expensive, and encouraged a high percentage of individual responses, enabling detailed data collection (Palinkas *et al.*, 2015).

### Data Processing and Analysis

In order to establish behaviour patterns and particular outcomes seen during the research process,

the obtained data was analyzed. Depending on whether the data was quantitative or qualitative, the raw data was coded, categorized, and organized. The Statistical Package for the Social Sciences (SPSS version 26) was used to analyze the data. While Pearson correlation was used for inferential statistics, percentages, and frequencies were used for descriptive statistics.

## RESULTS

### The Availability of the Physical Facilities and Resources for Vocational Training and Skills Acquisition

The trainers were asked to score the suitability, quality, and relevance of the training tools. From the results from the responses, majority of the respondents strongly disagree 78 (37.7%), followed by those who disagree 69 (33.3%) with the statement that there were not enough provision of physical training resources and equipment. On the statement that there is quality workshop equipment and workbenches available, majority of the respondents Disagree 92 (44.4%) followed by those who strongly disagree 55 (26.6%).

For the statement that the training tools are modern and relevant, providing skills needed to meet market demand, majority of those who took part in the survey disagreed 88 (40.6%). the same was reflected in the statement on nature and availability of training resources influence the acquisition of vocational skills and equipment where majority disagreed (42.5%). when the County Directors of vocational Training as well as the vocational training centre Principals were questioned on the same, they gave a different response. they indicated that there is not enough provision of physical training resources and equipment, there is quality workshop equipment and work benches available, the training tools are modern and relevant, providing skills needed to meet market demand as well as that the nature and availability of training resources influence the acquisition of vocational skills and equipment.

**Table 3.3 : Response on the adequacy of the physical facilities for the acquisition of vocational skills**

Statement	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	total
There is not enough provision of physical training resources and equipment	22 (10.6%)	27 (13.0%)	11 (5.3%)	69 (33.3%)	78 (37.7%)	207 (100.0%)
There is quality workshop equipment and work benches available	9 (4.3%)	34 (16.4%)	17 (8.2%)	92 (44.4%)	55 (26.6%)	207 (100.0%)
The training tools are modern and relevant, providing skills needed to meet market demand.	21 (10.1%)	31 (15.0%)	17 (8.2%)	84 (40.6%)	54 (26.1%)	207 (100.0%)
The nature and availability of training resources influence the acquisition of vocational skills and equipment	15 (7.2%)	21 (10.1%)	12 (5.8%)	88 (42.5%)	71 (34.3%)	207 (100.0%)

While trainers expressed dissatisfaction with the provision, quality, and relevance of training tools and equipment, County Directors of Vocational Training and Principals perceived a different reality, indicating that there is sufficient provision of resources and equipment, and that these are of high quality and relevance. This finding is consistent with the understanding that perceptions of adequacy and quality can vary based on the perspectives of stakeholders involved. Similar disparities in perceptions have been noted in other studies within the field of Vocational education and training. For instance, research conducted by Smith and Jones (2018) revealed that trainers often perceive a lack of resources and support, which they believe hampers the effectiveness of vocational training programs. This sentiment aligns with the dissatisfaction expressed by trainers in this study regarding the availability and adequacy of physical facilities and resources. Conversely, a study by Brown *et al.*, (2019) found that administrators and policymakers tend to hold a more optimistic view of the resources and support available for vocational training programs. This mirrors the perspective of County Directors of Vocational Training and vocational training centre Principals in the

study, who indicated that there is sufficient provision of resources and equipment.

### Correlation Analysis of the Study Variables

The Pearson Correlation Coefficient assessed the relationship among the study variables. The task assesses both the strength of the link and the direction of the variables. This implies that as these variables change, the development of vocational skills follows a similar trend. According to Mhadavi (2013), a connection is considered very weak if it is less than 0.3, weak if it is between 0.3 and 0.5, and moderate if it is between 0.5 and 0.7. A relationship is considered vital when the correlation coefficient is more significant than 0.7. The trainee perspective showed a strong correlation ( $r = 0.859$ ) with the learning of vocational skills. With  $r = 0.800$ , there was a significant correlation between trainees' satisfaction levels and their learning of occupational skills. The study showed a strong correlation between trainees' perceptions and their acquisition of skills. Vocational training institutions should endeavor to establish a good learning environment that stimulates motivation and involvement in order to improve the trainee perspective. Encouraging students to expand their knowledge and skill sets will improve their attitude towards training.

**Table 3.4: Correlation Analysis**

Correlations		Trainees Attitudes	Trainees Satisfaction Level	Physical Facilities	Availability of Qualified Personnel	Intervening Variables	Acquisition of Vocational Skills
Trainees Attitudes	Pearson Correlation	1	.679**	.782**	.838**	.621**	.859**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	207	207	207	207	207	207
Trainees Satisfaction Level	Pearson Correlation	.679**	1	.840**	.746**	.495**	.800**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	207	207	207	207	207	207
Physical Facilities	Pearson Correlation	.782**	.840**	1	.847**	.491**	.884**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	207	207	207	207	207	207
Availability of Qualified Personnel	Pearson Correlation	.838**	.746**	.847**	1	.527**	.913**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	207	207	207	207	207	207
Intervening Variables	Pearson Correlation	.621**	.495**	.491**	.527**	1	.547**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	207	207	207	207	207	207
Acquisition of Vocational Skills	Pearson Correlation	.859**	.800**	.884**	.913**	.547**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	207	207	207	207	207	207

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

**CONCLUSION**

According to the study findings, Trainees expressed dissatisfaction with various aspects of the training, including the courses offered, training methodologies, workshops, workbenches, equipment availability, and library and learning resources. Trainers expressed dissatisfaction with the provision, quality, and relevance of training tools and equipment, County Directors of Vocational Training and Principals perceived a different reality, indicating that there is sufficient provision of resources and equipment, and that these are of high quality and relevance. This dissatisfaction was caused by a lack of modern equipment, no reference materials, and no assessment feedback, and the training process was not monitored and evaluated.

This sentiment aligns with the dissatisfaction expressed by trainers in this study regarding the availability and adequacy of physical facilities and resources. Conversely, a study by Brown *et al.*, (2019) found that administrators and policymakers tend to hold a more optimistic view of the resources and support available for vocational training programs. This mirrors the perspective of County Directors of Vocational Training and vocational training centre Principals in the study, who indicated that there is sufficient provision of resources and equipment.

For effective training, physical resources and training facilities are essential; the trainers considered

training resources and physical facilities insufficient. According to Khatete and Chepkoech (2018), if vocational education in Kenya is to meet the market skill gap as envisaged in the Vision 2030 economic blueprint, then physical resources and training facilities are critical for developing vocational skills. Vocational training centers in Tana River County lacked adequate training resources; the findings were consistent with Nyerere (2009), who discovered that vocational training centers do not have enough physical resources and training materials, making it difficult for trainees to learn practical skills.

**RECOMMENDATION**

- i. The vocational education needed improvement for vocational training centers in Tana River County to thrive and attract more trainees. By focusing on the availability of modern infrastructure, creating a positive learning environment, maintaining adequate physical facilities, and provision of the state of art equipment or facilities for practical lessons,
- ii. Advocate for policy interventions that can promote the value of vocational education. Collaborate with communities, stakeholders, and the government to address financial limitations, improve infrastructure development, and increase community involvement in vocational education initiatives.

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