Improving Technical Education for Human Resource Training for the Realization of Vision 2030: A Case of Technical Training Institutes

Author Detail

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Abstract:

The Kenyan Governments' vision 2030 plan seeks to make Kenya a middle level industrialized nation and improve the economic and social status of its citizens. The realization of this vision will be achieved with adequate human resource at the technology, technician and artisan levels of skill training. Technical Training institutions (TTIs) are charged with the responsibility to train technicians and artisans. Concerns have been raised on the quality and quantity of the graduates coming out of these training institutions. The current study sought to investigate strategies that should be put in place to enhance the training in TTIs. A descriptive survey research design was used for this study with heads of academic departments and students as respondents. Questionnaires and interview schedules were used for data collection. The study established that training was conducted with inadequate teaching staff and obsolete equipments. The study recommends that adequate staff should be hired in training institutions and programmes put in place to upgrade the skills and knowledge of trainers in light of changing technology. Training facilities in the training institutions should urgently be upgraded.

Key Terms: technical training, human resource training

Introduction

Education world over is recognized as a critical determinant of the country's social and economic development (Psacharopoulos & Woodhall, 1985). The Kenyan government has emphasized its commitment to investing in education for the benefit of citizens and the entire country through accelerated industrial transformation. In the sessional paper No.2 of 1996, on industrial transformation by the year 2020, the government argues for industrialization as a means to accelerate the country's economic development (G.O.K, 1996). However, this will remain elusive, as it requires enormous human resource support. The government observes "…Kenya cannot industrialize unless the country has a sufficient reservoir of trained Indigenous human resource at all levels and especially in the technical fields" (G.O.K, 1999, 43).

This implies that human resource needs to be developed through formal training by impact relevant and desired skills by industries and business organizations. The sessional paper No.2, also pointed out that technical training institutions (TTI) have a big role to play in training technicians, craftsmen and artisan who are the actual workmen for the industrialization process. This is in recognition of the fact that the skill needs in the work place is one of the fastest changing in the world today. Skills and knowledge are the engines of economic growth and social development (ILO, 2003). The shift is towards high technology, service-oriented and self-directed work teams (Hull, 1997).

From the observations, it can be said that TTIs need to be given the necessary attention if this industrial transformation is to be realized by the year 2030. The 2003/2005 national development plan decries the imbalance in the labour force mix by observing that "…the current ratio of technologists to craftsmen to artisan is 1: 3: 12 as compared to an optimal of 1: 5: 30". The imbalance in labour force, impacts negatively on development, which is a crucial to industrialization (G.O.K, 2002, 58).

The implication of the above concerns is that TTIs need to enhance the training of craftsmen and artisans. UNESCO (1995) observes that Kenya's main challenge in technical and vocational education is the improvement of the quality of training at all levels to ensure relevant knowledge and skills. The nature of the work is also changing, thereby demanding changing skill levels that require education and training (Billett, 2001; ILO, 2003). As technology changes, there is need for training institutions to change their ways of training (Virgona, Waterhouse, Sefton & Sanguinetti, 2003). The quality of training in TTIs has been blamed on inadequacy of staff and training facilities. However no empirical studies have been conducted to substantiate this claim which is a contention that the current study sought to investigate.

Statement of the Problem

Technical skills are a necessary condition for Kenyans industrialization by vision 2030. These skills are offered by the TTIs. Concerns have risen on the quality and quantity of graduates coming from these training institutions. The current

study sought to determine the availability of facilities and human resource for the training of human resource necessary to realize Vision 2030.

Objectives of the Study

The following objectives were formulated to guide the study: -

i. To assess the adequacy of training facilities for human resource training need for the vision 2030.
ii. To determine the adequacy of teaching staff for human resource training for the vision 2030.

Methodology

This study was conducted using descriptive survey research. This design was appropriate for the study as it enabled the collection of the facts on the status of training in TTIs. This study was carried out in eight TTIs in Kenya. Heads of Departments and students participated in the study. The research instruments that were used for data collection included questionnaires and an interview schedule. The content validity of the research instruments was ensured through expert judgment. Reliability of the instruments was tested using the spearman prophesy formula after piloting. A reliability coefficient of 0.81 was found. Data generated from the study was analyzed by use of descriptive statistics and presented below.

Results and Discussions

The study sought information on the adequacy of trainers in the departments. This information is presented in Figure 1

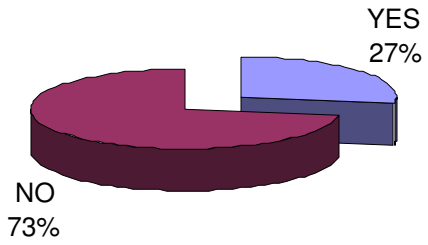

Figure 1. Adequacy of Trainers in TTIs.

Information on Figure 1 shows that majority (73%) of Heads of Department (HODs) felt that TTIs operates with inadequate trainers. Trainers are a critical component of the training requirements. These findings contradict the G.O.K, (2005) observation on the need for adequate staffing for effective education at all levels of training.

The study sought information on the academic qualifications of TTI trainers. Table 1 presents findings on the trainers' level of academic qualifications.

Table 1: Levels of Qualification

Level	Frequency	Percentage
Diploma	26	32.1
Higher Diploma	18	22.2
First Degree	26	32.1
Masters	11	13.6

Most (32.1%) of the trainers are either diploma holders or first-degree holders. About 22.2% and 13.6% of the trainers were said to have higher diploma and masters respectively. The study established that majority of the trainers were either diploma holders or first degree graduates. This is despite the fact that most TTI graduates left the institutions with a diploma qualification. The trainers' level of qualification is critical in determining the efficiency of the training process. Aduda (2003) observes that the trainer should possess higher qualification to effectively execute the training duties/roles.

The G.O.K (2005) observes that training facilities are critical if education in Kenya is to meet the technological market skill needs and move the country to the vision 2030. The adequacy of training facilities determines the learners' level of skill competence. An item on the adequacy of training facilities was included in the H.O.Ds and graduates questionnaire. Table 2 presents findings on the HODs and graduates opinion on the adequacy of physical facilities.

Table 2: Adequacy of Physical Facilities

	H.O.Ds	Graduates
Response	Percentage	Percentage
Yes	16.7	36.9
No	83.3	63.1

The majority (83.3%) of the H.O.D respondents indicated that training facilities were not adequate whereas majority of the graduate respondents (63.1%) indicated that the training facilities in T.T.Is were inadequate. This implies that majority of the H.O.Ds and graduates felt that T.T.Is conducted training using inadequate facilities. The G.O.K (2005) observes that training facilities are critical if education in Kenya is to meet the technological market skill needs and move the country to the vision 2030.

The study sought information on the impact of the availability of training facilities on the quality of TTI training. Majority (85.4%) of respondents indicated that availability of training facilities did affect the relevance of skills to market skill needs whereas 14.6% felt that facility availability had no effect on skill relevance.

State of Training Equipment

The study sought information on the state of training equipment's in TTIs. The H.O.Ds and graduates were asked to rate the state of training equipments ranging from obsolete to modern. This information is presented in Table 3.

Table 3: HOD's View on the State of Training Equipments

	H.O.Ds		Graduates	
State training equipment	Frequency	%	Frequency	%
Modern	1	2.1	17	10.1
Good	23	47.9	47	28.0
Neutral	11	22.9	32	19.0
Bad	7	14.6	33	19.6
Obsolete	6	12.5	39	23.2

At 47.9% the HODs felt that the training facilities are good while 22.9% were non-committal on the state of facilities. 14.6% rated the facilities as bad whereas 12.5% indicated that facilities were obsolete and only 2.1% of respondents rated the facilities as modern. 28% of Graduate respondents rated the training equipments used in T.T.Is as good while 23.2% rated the equipments as obsolete. 19.6% indicated the equipment to be bad whereas 19% had no opinion on the state of the training equipments and 10.1% of the graduate's respondents rated the training equipments as modern. A larger proportion of the respondents rated the T.T.I training equipments as obsolete compared to the proportion that rated the training equipments as modern. The study sought the respondents' opinion on the need to modernize the training equipments. Table 4 shows the data by frequency and percentages.

Table 4: Need to Modernize Equipment

Response	Frequency	Percentage
Yes	47	97.9
No	1	2.1

Majority (97.9%) of the respondents indicated that there was need to modernize the training equipment used in T.T.Is. Only 2.1% felt that modernizing the equipment was not a priority. The study revealed that there was an urgent need for T.T.Is to modernize their training equipment.

The study sought information on the effects of the obsolete training equipment on the relevance of T.T.I training. An item on the graduate's questionnaire inquired on the effects of bad or obsolete training equipments on the relevance of T.T.I training to market skill needs. This information is presented in Table 5.

Table 5: Effect of Bad/Obsolete Equipment on Relevance

Response	Frequency	Percentage
Eroded Relevance	81	90.0
Did not affect Relevance	9	10.0

The majority (90%) of respondents indicated that the facilities eroded the relevance of training to market skill needs whereas 10% of respondents indicated that the state of the training equipment did not have effects on the relevance of training to market skill. This information suggests that training equipment used in T.T.Is compromised the relevance of T.T.I taught skills to skill needs in industries and business organizations.

Challenges that Hinder Training in T.T.Is

An open-ended question was included in the questionnaires and interview schedule that sought information on the hindrances that T.T.Is faced in executing their mandate. Respondents were requested to list the perceived hindrances. The field data on the factors that hinder T.T.I training is presented on Table 7.

Table 7: Hindrances to T.T.I Training

Hindrances to T.T.I training	Frequency	Percentage
Obsolete Curriculum	211	23
Inadequate Facilities	129	14
Obsolete Equipments	225	24.6
Lack of Refresher/ Retraining Courses for Teachers	115	12.6
Inadequate Personnel	80	8.7
Poor Management of T.T.Is	23	2.5
Lack of Attachment Policy	76	8.3
Inadequate funding	54	5.9
Poor Motivation of Teachers	3	0.3

The majority (24.6%) of the respondents indicated that training in T.T.Is was hindered by obsolete training equipment used in T.T.Is for training, 23% of the respondents identified obsolete curriculum to be an hindrance, 14% and 12.6% of the respondents indicated that T.T.I training was hindered by inadequate facilities and lack of refresher courses for teachers respectively, whereas 8.7% of the respondents identified inadequate personnel as an hindrance to T.T.I training. 8.3% of the respondents identified the absence of an attachment policy for T.T.I trainers and trainees as the hindrance to T.T.I skill training, 5.9% and 2.5% of the respondents identified inadequate funding and poor management of T.T.Is as an hindrance to T.T.I training. Only 0.3% of the respondents felt that poor motivation among teachers was a hindrance to T.T.I training. The study established that T.T.Is is hindered in the training endeavour by a myriad of factors in the pursuance of their training objectives.

Strategies to Boost T.T.I Training

The study sought the respondents' suggestion on strategies that would help T.T.Is improve the quality of training for the vision 2030. Table 8 presents data on the proposed strategies.

Table 8: Proposed Strategies to Boost T.T.I Training

Strategies to boost T.T.I training	Frequency	Percentage
Regular market survey	80	7.4
Refresher courses for teachers	108	10.0
Update training equipment	256	23.7
Hire adequate and competent trainers	80	7.4
Increase funding	34	3.2
Motivate T.T.I trainers	16	1.5

The majority (23.7%) of the respondents identified an update of training equipment as a viable option to boost skill training, whereas 10.0% of the respondents indicated that refresher courses for teachers as strategies that T.T.Is should adapt to boost training. 7.4% of the respondents identified regular market survey and hiring of adequate and competent

trainers each as a possible option to address training challenges in the T.T.Is whereas 3.2% of the respondents proposed increased funding for T.T.Is as method to improve skill training in the T.T.Is. Only 1.5% of the respondents suggested motivation of trainers in T.T.Is as a strategy that could help T.T.Is to achieve the training objectives and meet the expectations of employers in industries and business organizations in Kenya.

Conclusions and Recommendations

i. Most T.T.Is operates with inadequate staff. This compromises the quality of teaching and learning in T.T.Is. The government should implement policies to ensure adequate and qualified training staff is employed for this important skill training sector.

ii. Most of the training equipments found in T.T.Is are not technologically in tandem with equipments found in industries and business organizations. The training equipments are inferior to the equipments used in industries and business organizations. This state of training equipments eroded the relevance of T.T.Is taught skills to market skill needs. The TTIs should partner with other stakeholders to ensure that learners are exposed to the most modern facilities in the industries. The government should also allocate more funds for TTIs to acquire the necessary training facilities.

iii. The study established that training in TTIs utilized obsolete curriculum. There is need for regular revision of the curriculum. The policy on technical training should be revised to ensure regular market surveys and provide forums for stakeholders' participation in curriculum reviews.

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