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IMPROVING TECHNICAL EDUCATION FOR HUMAN RESOURCE TRAINING FOR THE REALIZATION OF VISION 2030: A CASE OF TECHNICAL TRAINING INSTITUTES

Muthaa, G.M.
Department of Education, Chuka University, P. O. Box 109, 60400, Chuka
Email: gmuthaa@yahoo.com

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ABSTRACT
The Kenyan Governments' Vision 2030 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. Technical Training Institutes 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 Technical Training Institutes. Descriptive survey research design was used for the study. Heads of academic departments and students were used for the study. Questionnaires and interview schedules were used for data collection. The study established that training was conducted with inadequate teaching staff and obsolete equipment. The researcher recommends that adequate staff should be hired in training institutions and programmes put in place to upgrade the skills and knowledge of trainers in the light of changing technology. Training facilities in the training institutions should urgently be upgraded. Thus findings of this study will benefit all stakeholders on the critical needs of Technical Training Institutes toward the realization of the Vision 2030.
Key words: *Improving, Technical training, Human resource training*

INTRODUCTION
In the Sessional Paper No. 2 of 1996, on industrial transformation by the year 2020, the government views industrialization as a means to accelerate the country's economic development (GOK, 1996). However, this will remain elusive, as it requires enormous human resource support. It 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 GOK (1999, 43).

This implies that human resource needs to be developed through formal training to impact relevant and desired skills. The Sessional Paper No.2, also pointed out that Technical training Institutions have a big role to play in training technicians, craftsmen and artisan who are the actual workmen for the industrialization process. From the fore going, it can be said that TTI's need to be given necessary attention if this industrial transformation by the year 2030 is to be realized. The 2003/2005 national development plan decries the imbalance in the labour force mix:

> 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, GOK (2002, 58).

The implication of the above concerns is that TTI's 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 to the employment requirements.

Statement of the Problem and Objectives of the Study

Technical skills are a necessary condition for Kenyans industrialization by vision 2030. These skills are offered by the TTIs. Concerns have been raised 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 realization of vision 2030. 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 collection of the facts on the status of training in TTI's. It also allowed for collection and analysis of data in a manner that combined relevance to the research objectives with economy in procedure. This study was carried out in eight TTI's of Nairobi and Mount Kenya regions. Heads of Departments and students participated in the study. The research instruments that were used for data collection included questionnaires and interview schedule. The content validity of the research instruments was ensured through expert judgment. Reliability of the instruments was tested after piloting. A correlation coefficient of 0.849 and 0.921 were realized for the graduates and H.O.Ds questionnaires respectively. Data generated from the study was analyzed by use of descriptive statistics and presented in tables and figures.

RESULTS AND DISCUSIONS

The sample constituting of Graduates and H.O.Ds was analyzed by gender. The male respondents were more (67%) than the female respondents (33%).

Trainers of TTIs

Trainers are a critical component of the training requirements. The GOK, (2005) emphasizes on the need for adequate staffing for the effective education at all levels of training. The study sought information on the adequacy of trainers in the departments. Majority of H.O.Ds felt that TTI's operates with inadequate (73%) trainers.

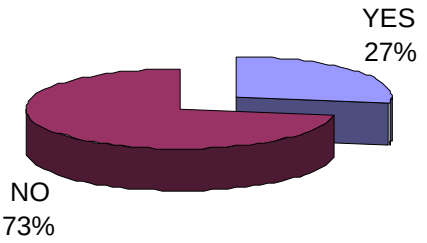

Figure 1. Adequacy of Trainers in TTI

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. The study sought information on the academic qualifications of TTI trainers. Table 18 presents findings on the trainers' level of qualifications. Most of the trainers (32.1%) are either diploma holder 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.

Table 18. Levels of Qualification

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

Facility Availability

The GOK (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 availability of training facilities is critical to quality teaching and training. An item on the adequacy of training facilities was included in the H.O.Ds and graduates questionnaire. Table 24 presents findings on the H.O.Ds opinion on the adequacy of physical facilities. Majority of the H.O.D respondents (83.3%) indicated that training facilities were not adequate compared to only 16.7% of respondents who indicated that the physical facilities were adequate. This implies that the H.O.Ds felt that TTI's operated with inadequate training facilities.

Table 24 H.O.D.'S View on Adequacy of Physical Facilities

Response	Frequency	Percentage
Yes	8	16.7
No	40	83.3

The graduates' opinion was also sought in reference to the adequacy of the physical facilities. Majority of the graduate respondents (63.1%) indicated that the training facilities in TTI's were inadequate while 36.9% indicated that the facilities were adequate. This implies that majority of the T.T.I graduates felt that they were trained using inadequate training facilities. This data is captured on Table 25.

Table 25 Graduates Opinion on Availability of Facilities

Response	Frequency	Percentage
Yes	62	36.9
No	106	63.1

Effect of Facility Availability on Training

The study sought information on the effects of the availability of training facilities to the T.T.I training. H.O.Ds were asked whether the availability of facilities in TTI's affected the relevance of skill training to market skill needs. Majority of respondents (85.4%) 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. The information on the effects of facility availability to relevance of T.T.I training is presented on Table 27.

Table 27. Effects of Facility Availability on Training

Response	Frequency	Percentage
Yes	41	85.4
No	7	14.6

State of Training Equipment

The study sought information on the state of training equipments in TTI's. The H.O.Ds were asked to rate the state of training equipments ranging from obsolete to modern. Table 28 presents the H.O.Ds view and Table 27 presents the graduates view. At 47.9% the H.O.Ds felt that the training facilities are good, 22.9% were non-committal on the state of facilities, 14.6% rated the facilities as bad, 12.5% said the facilities were obsolete whereas only 2.1% of respondents rated the facilities as modern. Though a reasonable proportion of respondents rated the training equipments as good a greater proportion of respondents rated the equipments obsolete (12.5%) compared to the 2.1% who rated the equipments as modern. Modern referred to the training equipments being in tandem with the equipments used in the industries while obsolete referred to the situation where the training equipments were absolutely out of tune with the equipments used in industries and business organizations.

Table 28. H.O.D's View on the State of Training Equipments

State training equipments	Frequency	Percentage
Modern	1	2.1
Good	23	47.9
Neutral	11	22.9
Bad	7	14.6
Obsolete	6	12.5

The study also sought information on the state of training equipments from former trainees of TTI's. Table 29 presents the graduates opinion on the state of training equipments. Graduate respondents (28%) rated the training equipments

used in TTI's as good, 23.2% rated the equipments as obsolete, 19.6% indicated the equipments to be bad, 19% held no opinion on the state of the training equipments whereas 10.1% 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.

Table 29. Graduate's View on State of Training Equipments

State of training equipments	Frequency	Percentage
Modern	17	10.1
Good	47	28.0
Neutral	32	19.0
Bad	33	19.6
Obsolete	39	23.2

The study sought the respondents' opinion on the need to modernize the training equipments. Respondents were asked to comment on the need to modernize the training equipments. Majority of the respondents 97.9% indicated that there was need to modernize the training equipments used in TTI's. Only 2.1% felt that modernizing the equipments was not a priority. Table 29 shows the data by frequency and percentages. The study revealed that there was urgent need for TTI's to modernize their training equipments.

Table 31. Need to Modernize Equipment

Response	Frequency	Percentage
Yes	47	97.9
No	1	2.1

Effects of Bad or Obsolete Training Equipments to Relevance of Training

The study sought information on the effects of the obsolete training equipments to 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. Majority of respondents (90%) 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 effect on the relevance of training to market skill needs. This data indicated that training equipments compromised the relevance of T.T.I taught skills to skill needs in industries and business organizations.

Table 35. Effect of Bad/Obsolete Equipment on Relevance

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

Challenges that Hinder Training in TTI's

An open-ended question was included in the questionnaires and interview schedule that sought information on the hindrances that TTI's faced in executing their mandate. Respondents were requested to list the perceived hindrances. Majority of the respondents (24.6%) indicated that training in TTI's was hindered by obsolete training equipments used in TTI's 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 TTI's 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 TTI's are hindered in the training Endeavour by a myriad of factors in the pursuance of their training objectives. For the training institutions to realize their objectives, TTI's should urgently address the hindrances to training. The field data on the factors that hinder T.T.I training is presented on Table 99.

Strategies to Boost TTI Training

To enable the study propose a way forward on skill training in TTI's an item was included in the questionnaires and interview schedule that sought the respondents suggestion on strategies that would help TTI's improve the quality of

training. Table 100 presents data on the proposed strategies. Majority of the respondents (23.7%) identified an update of training equipments as a viable option to boost skill training, 18.6% and 16.5% of the respondents proposed curriculum review and involvement of employers respectively in T.T.I training as viable options that would improve training in TTI's whereas 11.6% and 10.0% of the respondents indicated that attachment of trainees with reputable firms and refresher courses for teachers as strategies that TTI's should adapt to boost training.

A total of 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 TTI's whereas 3.2% of the respondents proposed increased funding for TTI's as method to improve skill training in the TTI's. Only 1.5% of the respondents suggested motivation of trainers in TTI's as a strategy that could help TTI's to achieve the training objectives and meet the expectations of employers in industries and business organizations in Kenya. Information on strategies that could boost T.T.I training is presented on Table 100.

Table 99. Hindrances to TTI 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 TTI's	23	2.5
Lack of Attachment Policy	76	8.3
Inadequate funding	54	5.9
Poor Motivation of Teachers	3	0.3

Table 100. Proposed Strategies to Boost TTI Training

Strategies to boost T.T.I training	Frequency	Percentage
Regular market survey	80	7.4
Refresher courses for teachers	108	10.0
Curriculum review	201	18.6
Update training equipments	256	23.7
Involvement of employers in training	178	16.5
Hire adequate and competent trainers	80	7.4
Attachment of trainees with reputable firms	125	11.6
Increase funding	34	3.2
Motivate T.T.I trainers	16	1.5

CONCLUSIONS

1) Most TTI's operates with inadequate staff. This compromises the quality of teaching and learning since the short fall in the number of trainers in addressed through Hiring part-time teachers, multi-grade teaching, and the students individualized learning engagements.
2) Technical training institutes operate with inadequate training facilities. Majority of the respondents indicated that TTI's operated without adequate physical facilities.
3) Most of the training equipments found in TTI's 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 TTI's taught skills to market skill needs.
4) Besides majority of the TTI trainers were diploma holders despite the fact that most of the T.T.I trainees were enrolled into diploma programs The study established that the current staffing in TTI's compromised the quality of training and consequently this affected the quality of graduates upon employment in industries and business organizations.

RECOMMENDATIONS

1) The TTI's should be adequately staffed with qualified trainers. A policy should be enacted to guide on the level of qualifications that a trainer should have to teach at each level of training.

2) The TTI's should be equipped with modern training facilities and equipment to enable them achieve their function of quality graduates.

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