

## **Contribution of Enterprises towards TVET Teacher Training Programs: A Case of Rift Valley and Western Kenya Regions**

1.Keter Julius Kipkogei. 2. Joyce Wacuka Kanyiri 3.Murgor Titus Kiptoo

*1. Department of Technology Education, Moi University, Kenya*

*2. Department of education management and policy studies, Moi University, Kenya*

*3. Department of Technology Education, Moi University, Kenya*

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**Abstract:** A big challenge for the development of TVET training in Kenya has been the relevance of the skills taught to the dynamic market demands and the terminal nature of TVET training including the lack of sufficient training opportunities for TVET at higher and post graduate levels. To confront the above situation, the government ought to promote partnerships with industry to provide the students with an authentic learning environment and exposure to real-life industry projects and applications. Therefore, the present study was carried out to examine the effect of Public-Private Partnership (PPP) towards TVET teacher training programs. The study was carried out in twelve (12) selected TVET institutions spread within the Rift Valley and Western regions in Kenya. Multiple-case study was used in the study. In addition, the study employed qualitative and quantitative approaches. The funding of TVET trainers training activities from enterprise sources was nonexistent 0% in other words no instructor from institutions under study had benefited from training scholarship from the industry. Although there was evidence of prevalence of industrial training for tutors with a frequency of 1 representing 8% of all TVET trainers on scholarships under this study, the enterprise support was only offering industrial attachments opportunities and not funding. Concerning in-service training for teachers only a frequency of 3 representing 25% of TVET trainers had undergone such training. Therefore, there is need to institutionalize industry based in-service training for teachers/trainers to equip and expose trainers to latest technologies in the market.

**Keywords:** Training, Partnership, Teacher, TVET, Enterprise

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### **I. INTRODUCTION**

The education sector in Kenya faces many challenges (financial, physical and human resources). Despite these challenges the government has not fully embraced PPP in TVET institutions. The private sector and general business community's involvement in education is usually limited and associated with philanthropy.

Any attempt by the Kenya government to increase budgetary allocations towards the education sector would generate greater imbalance in the development of the country's social economy. It is essential, therefore for the private sector and general business community in Kenya to compliment government efforts through their corporate social responsibilities, to provide funds or the expansion as well as establishment of new physical infrastructures, provision and maintenance of facilities, equipment and instructional materials to secondary educational institutions.

Collectively the findings of previous studies provide evidence that partnership between TVET and industry players is beneficial to both parties. However, the absence of partnership, between industry and TVET institutions, portends great disadvantages to both parties. To the Technical education and training, it will fail to generate qualified skilled workers, and to the industries, it will be forced to invest in providing retraining program for their workers, or to take the risk to hire unskilled workers who produce low quality products. In the end, the society will have to pay more for this inefficiency, to cover the costs of unproductive technical institutions and higher prices for goods because of inefficient workers. The situation will cause negative impacts to both the human resources development and the national economy (Lauglo, 2005).

#### **Theoretical framework**

Human capital theory brings out the aspect of input, process, output, outcome and impact as a direct transformation of unskilled worker to skilled and hence productive worker. This transformation involves investing in education and training through acquiring financial contribution, physical and human resources as the main input towards the process of acquiring quality and relevant skills. The ultimate output of this process is a trained graduate. Based on the quality, relevance and adequacy of training and skills attained, the outcome of

the training process is absorption to the job market as a productive worker who then earns an income. Viewed as mechanism in which transformation takes place. The success of this transformation is greatly influence by the training process. An effective training process will promote acquisition of quality, relevant and adequate skills which in return will raise the chance of employability of the graduates.

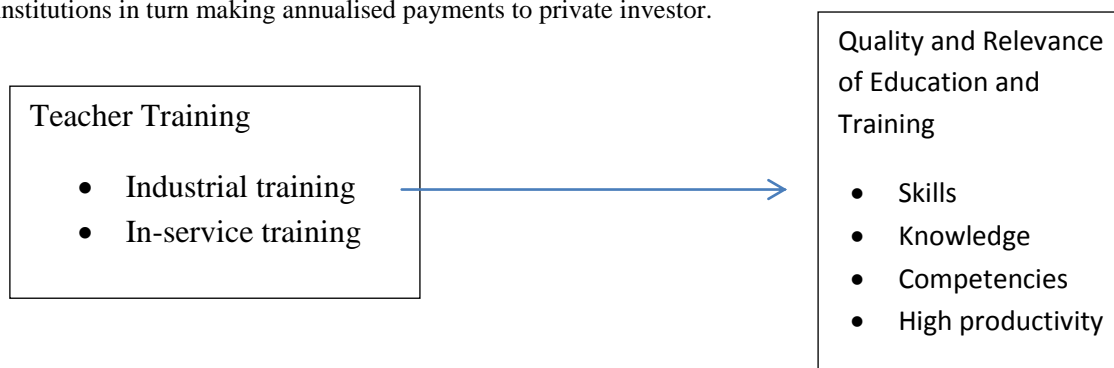
There are sixteen Vocational education theorems which were developed by Allen and Charles A. Prosser in 1925 as a basis for sound and successful programs. Prosser was the National Director of vocational education and training in the United States. Many attempts have been made throughout subsequent years to rephrase or update these statements, without success. The theorems asserts that There are certain minimum standards without which one may not reasonably expect to operate a program of vocational education and be effective generally in programs of either preparatory or extension education. There is little reason to believe that these basic standards have changed materially since the early development of the program.

### **Partnership in TVET Teacher Training**

According to NCTE (1998) in any educational programme teacher is the most important element as he plays the pivotal role in the implementation of the whole educational process. The report also added that the teacher is the one who determines learners' achievements and weaknesses by his professional competency. So it is evident that the quality of education basically depends on the quality of teachers. However, a report by Biswas (2015) showed that one of the major problems confronting the states with large teacher vacancy and inadequacy of trained teachers is the inadequate number of the teacher training institutions and their annual intake capacity. The report further showed that to meet up the crisis a large number of initiatives have been taken by private sectors. Though the private sector helps in expanding the capacity for training teachers it is characterized by imbalances leaving much gap for the regional disparities. According to Callan and Ashworth (2004), TVET teacher education should be based on tripartite collaboration between teacher training institutions, industry and government. Okolocha (2012) is of the view that for vocational technical education to meet the economic, social and political trends of the time, a nation must use qualified vocational training professionals/teachers in implementing vocational technical education programmes.

On the competency of the personnel for vocational education, Prosser and Allen (1925) theory states that Vocational education will be effective in proportion as the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach. The implication of this theory to the present study is that the personnel or vocational educator must be competent in the skills he/she is handling or must be a master of those skills theoretically and practically. This is because teachers can only give to the students what they know and what makes up a vocational teacher are the skills and knowledge of the occupation. It will follow therefore that only competent teachers who have been through actual successful employment should be the best for vocational programs.

Biswas (2015) reported that the models of Public Private Partnership in Teacher Education include; Joint Venture Model Private sector forms a joint venture company along with the government where private sector is responsible for investment in construction and management of the operations while government contributes by way of fixed assets at a predetermined value, whether it is land, buildings or facilities or it may contribute to the shareholding capital; Management Contract Model where the private sector invests in infrastructure and runs operations and management and the government takes the responsibility to pay the private investor for specified service; Equity Model The government and private sector both invest in infrastructure and the management operations are done by private investors and Annuity Model where the private sector invests in the infrastructure and the government runs the operations and management of the institutions in turn making annualised payments to private investor.



**Figure 1: conceptual framework**

## **II. RESEARCH METHODOLOGY**

### **Research Approach**

The multiple case-study method was used in this research. A multiple case-study enables the researcher to investigate differences inside and between cases with the aim of replicating finding across cases. As comparisons will be depicted, it is necessary for the cases to be selected cautiously so the researcher will be able to foresee similar results across cases, or predict contrasting results based on theory (Yin, 2003).

In addition, the study employed qualitative and quantitative approaches, so as to simplify the interpretations of findings. Qualitative research is reported in terms of verbal description rather than numerical form. It employs semi-structured interview, observation checklist and documentary analysis which are flexible as well as sensitive to the social context in which data are produced (Cohen et al, 2000).

### **Research Study area**

The study was carried out in twelve (12) selected TVET institutions spread within the Rift Valley and Western regions in Kenya. The western Kenya region comprises of former western and Nyanza provinces. The research was carried out in 9 (nine) counties spread within the Two TVET administrative regions. The nine counties were Migori, Kisii, Kericho, Nandi, UasinGishu, ElgeiyoMarkwet, Trans Nzoia, Bungoma and Kakamega.

### **Study Population**

Population is basically a large group that bears the characteristics of the research issue. It can also be described as a group consisting of individuals, things or elements that fit a certain specification. TVET system in Kenya is classified for administrative purposes into five regions namely, Coast region, Nairobi region, Mt Kenya region, Rift valley region and Western Region. The current number of registered TVET institutions is 540 according to data obtained from TVET website. The population involved in this study were staff members of TVET institutions and selected industry partners.

### **Sample Frame**

Sample frame is a small group of respondents drawn from a population in which the researcher is interested in gaining information and drawing conclusion (Munn and Drever, 1996). Also, a sample is part of the population a researcher studies so that characteristics of the population are represented by it (Cohen *et al.*, 2000). The sample for this study drawn from target population of staff members of TVET institutions and selected industry partners. To address this concern, Krejcie& Morgan (1970) came up with a table for determining sample size for a given population for easy reference. Based on this table, all Industrial link personnel in TVET institutions were involved.

### **Sampling of TVET institutions and participants**

In considering the TVET institutions for the study, a sample comprising of twelve TVET institutions (representing 31% of the entire population. The institutions were selected based on their unique characteristics such as varying geographical locations, Centre's of excellence status as well as a rich history of partnership with industry. The selected institutions were considered representative of the TVET system in Kenya. Purposive sampling was used in selecting participants from TVET institutions. Administrators who were actively involved in activities focused on promoting partnership within the training context were considered. They included, Principals, Deputy Principals, Academic Registrars, Directors in charge of Research and Extension, Liaison Officers and Heads of Departments.

### **Research instruments**

This study utilized the following research instruments; TVET Trainers questionnaires, Enterprise questionnaire, interview schedule and TVET trainers focused group discussions guide and comprehensive document analysis in data collection. These questionnaires and interview schedule questions were developed guided by an established interview protocol yielded information for answering the research questions. Various authors have recommended questionnaire as a very effective instrument that has the ability to collect large amount of information in a reasonably quick span of time (Orodho, 2009).

### **Validity and Reliability of Instruments**

A test is said to be valid when it measures what it is supposed to measure. Alternatively, a test whose performance closely resembles with an objectively defined criterion is said to be valid. On the other hand, the tendency towards consistency from one set of measurements to another is called reliability.

The researcher validated the data collection instruments (i.e. trainers' questionnaires, enterprise questionnaires and interview guide) by subjecting it to a rigorous scrutiny by two senior research experts and professors of curriculum instruction.

A pilot testing involved a small scale study designed to test logistics and gather information prior to a larger study. In this study pilot testing exposed deficiencies in the design and procedure anticipated for the study. Orodho (2009) describes that the most popular method of testing for internal consistency in the behavioral sciences is Coefficient alpha. Coefficient alpha was popularized by Cronbach's (1951), who recognized its general usefulness. As a result, it is often referred to as Cronbach's alpha. In reference to the merits and limitation of various reliability tests, this study adopted Cronbach's alpha technique and a value of 0.7 as an acceptable value. The Statistical Package for Social Sciences a computer software program was used to compute the alpha. The trainer's questionnaires computation for internal reliability of a 24 item scale was assessed using the Cronbach's Alpha technique. The scale yielded an alpha value of 0.8632. This value was acceptable. The enterprise questionnaires computation for internal reliability of a 26 item scale yielded an alpha value of 0.8733. This value was also acceptable.

### **Ethical Considerations**

The research protocol was developed to ensure high standard ethical conduct. Respect, treating respondent fairly and confidentiality were the basic guiding principles at all stages of the research. To ensure confidentiality, the researcher did not include or write the names of respondent on the data instruments except a code which enabled identification of the participants. As much as possible, the researcher strived to ensure privacy during interviews. To ensure that respondents were not coerced into participating against their will, they were clearly informed of the purpose of the study.

### **Data Analysis**

Multiple Attribute Utility Theory, (MAUT) formed the basis for data analysis in this research. MAUT was used to rescale a numerical value on some partnership attributes of interest on a scale of 1 to 10, with 1 representing the worst preference and 10 the best. Qualitative data generated will be subjected to content analysis while quantitative variables will be analyzed within the context of the MAUT framework. The stakeholder analysis approach will be employed to analyze the role of partnerships and other issues relating to institutional dynamics. Specific stakeholder analysis tools to be employed include the Venn diagramming technique, influence and importance matrix (IIM), and interaction matrix (IM). Analyzed results were finally presented in form of tables and figures.

## **III. RESULTS AND DISCUSSION**

### **Demographic information about TVET Institutions**

This study sought information on TVET institutions categorization, nature/forms/types of active partnerships. Table 1 below indicates the categorization in TVET institutions under the study.

**Table4. 1: Summary of TVET Institutions Categories**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
National polytechnics	3	25%
Institute of Technology	2	16.6%
Technical Training Colleges	5	41%
Vocational Training Colleges	2	16.6%
<b>Total</b>	<b>12</b>	<b>100%</b>

The findings show that the study covered both layers of TVET system in the area under study from national polytechnics to the newly established vocational training colleges.

### **Forms of TVET Partnerships**

Out of the 65 active partnerships only 31 representing 48 % was formalized by way of MOU and the remaining 34 representing 52 % were not formalized as shown in Figure 2

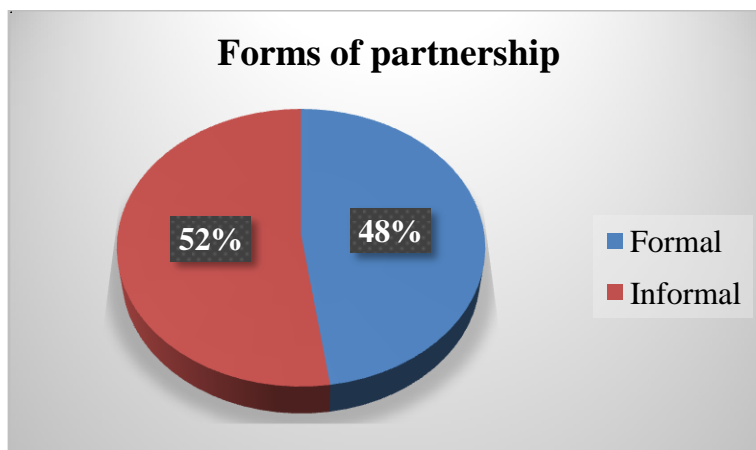


Figure 2: TVET Partnership Forms

The low level of involvement by Informal local enterprises such as Community organizations can be attributed to their low capacity and organizational mechanism.

**Contribution of Enterprises towards Teacher Training Programs**

The respondents were asked to respond to structured questions related to Teacher training programs in TVET institutions. The structured questions were grouped into three sub variables of the Teacher training programs namely; Funding of Teacher training activities in TVET, Industrial Attachment for TVET Teachers, In-service training for TVET trainers. Descriptive analysis technique in form of counts, frequencies and percentages was used to illustrate partnership activities in Teacher training programs. Table 2 below is a summary of the findings obtained from the study.

Table 2: Level of partnership in training of TVET Trainers programs

Trainers training activities	Contribution by TVET partners	
	Frequency	Percentage
Funding of Teacher training activities	0	0%
Industrial Attachment of Teachers	1	8%
In-service training for teachers	3	25%

The funding of TVET trainers training activities from enterprise sources was nonexistent 0% in other words no instructor from institutions under study had benefited from training scholarship from the industry. Although there was evidence of prevalence of industrial training for tutors with a frequency of 1 representing 8% of all TVET trainers on scholarships under this study, the enterprise support was only offering industrial attachments opportunities and not funding. Concerning in service training for teachers only a frequency of 3 representing 25% of TVET trainers had undergone such training (Table 2).

It was observed that most TVET trainers especial those who are fresh from college lack both theoretical and practical skills. One principal of a TVET institution under study had this to say:-

*We are sometimes disappointed when a graduate teacher fails to differentiate between spanners no 22 and No 20. But we don't blame them their training is wanting. I once wrote a letter to register my frustration with their products to one of the TVET teacher training institutions.*

*You know TVET training is competence based while our TVET teacher training is not competence based. This means trainers have a lot of deficiencies in practical training to handle our students.*

The results are attributed to the fact that enterprise-based training are conducted in the enterprise or in the workplaces but vocational training institutions are not capable of performing the two functions of pre-employment training and specialized advanced skill training as needed by specific employers. In the interest of sustainable development, achievement, and the competitive ability of young people, the whole TVET system has to be oriented toward the labour market and the employment system (Trowe, 2006).

Since enterprises are mostly like to be operating within the state of the art technology, they should be included on curricula panels to participate in curriculum development, they can also be used to in-service the teachers/trainers besides donating some equipment for training purposes (Kerre, 2017).

Okolocha (2012) argues that for TVET to meet the economic, social and political trends of the time, a nation must use qualified vocational training professionals/teachers in implementing vocational technical education programmes.

On the competency of the personnel for vocational education, Allen & Prosser, (1925) theory states that Vocational education will be effective in proportion as the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach.

The implication of this theory to the present study is that the personnel or vocational educator must be competent in the skills s/he is handling or must be a master of those skills theoretically and practically. This is because teachers can only give to the students what they know and what makes up a vocational teacher are the skills and knowledge of the occupation. It follows therefore that in the current dynamic world a competent teacher is the one who constantly undergoes training and retraining to validate his or her skills.

The findings of this study show that TVET trainers do not get sufficient support from the private enterprises in form of funding for their studies. This finding agrees with those of (Nzama, 2000; Mekonnen, 2014; Ezenwafor, 2015) which observed that in most developing countries, educators do not have direct contact with the labour market (through short-term) periodic secondments which would modernize and upgrade their practical knowledge on the actual technologies being employed in the workplace, as well as offer them insight into the actual practical needs of the labour market. This knowledge could then be incorporated into lessons or be passed on to colleagues through peer-mentoring.

TVET institutions as observed by this study have not developed sufficient modalities for TVET teacher's industrial training partnerships with enterprises. TVET teachers are largely left on their own and expected to be relevant and to produce quality graduates with practical skills that they themselves do not have.

Public training institutions may seek the advice and assistance of enterprises on curriculum development, the setting of quality standards, or performance evaluation, as well as the provision of information on training needs and planning, donation of equipment, vocational guidance and counseling, recruitment of successful trainees, or the organization of industrial attachments to give trainees or trainers practical experience (Mitchell, 1998).

#### IV. CONCLUSION

The finding gave a gloomy picture concerning the contribution of enterprise in TVET trainers training activities. No instructor from institutions under study had benefited from training scholarship from the industry/Enterprise. However, industrial training for TVET trainers was the only area where enterprise support was evidenced in form of offering industrial attachments opportunities and not funding to trainers.

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