

Enhancing TVET Institutions through Robust Partnerships and Industrial Collaborations in Kakamega County, Kenya

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Abstract:- Technical and Vocational Education and Training (TVET) institutions play a crucial role in equipping the Kenyan workforce with the skills needed to meet the demands of a rapidly evolving job market. To ensure the effectiveness and relevance of TVET programs in Kakamega County, Kenya, it is imperative to foster strong partnerships and collaborations with industries. This paper explores the significance of such partnerships and their impact on the development and growth of TVET institutions in the country. The objectives of this study are: to identify the various forms of collaboration utilized to align TVET curricula with industry demands; to assess the strength of partnerships and industrial collaborations between TVET institutions and industries in Kakamega County; to examine the challenges faced by TVET institutions and industries in establishing and maintaining partnerships and collaborations. A descriptive approach was employed for data collection comprising surveys. The analysis of data was facilitated by the use of Statistical Package for Social Sciences (SPSS) and presented in the form of tables, charts, and graphs. Participants included Industrial Liaison Officers (ILOs), heads of TVET institutions, employers of TVET graduates and trainees. The findings revealed that effective internships were the main form of collaboration between TVET institutions and industries. The study also highlights some challenges, including financial constraints and disparities in expectations between the industries and TVET graduates. Addressing these challenges is crucial to fostering a robust and sustainable collaboration. In conclusion, this paper emphasizes the significance of robust partnerships and industrial collaborations in elevating the quality and relevance of TVET institutions in Kakamega County, Kenya. By fostering strong ties with industries, TVET institutions can better equip their students with the necessary skills, knowledge, and experience to excel in the workforce. The findings of this study can serve as a valuable resource for educational policymakers, institutions, and industry stakeholders seeking to create a sustainable and mutually beneficial ecosystem for vocational education in the country.

Keywords:- Skills, Partnerships, and Collaborations.

I. INTRODUCTION

In Kenya, TVET institutions are managed under the State Department for Vocational and Technical in the Ministry of Education by the national government. TVET is also run by the county governments, these are the vocational training centers for youth polytechnics. The vision of TVET in the country is to provide skilled and globally competitive employable human resources. The mission is to provide, promote, and coordinate training by ensuring quality, inclusiveness, and relevance for the enhancement of national economic and global competitiveness. The specific objectives of TVET are among others: to provide adequate skills at all levels of the economy through practical training and work experience. (GoK, 2023). In enhancing TVET institutions, this study explores partnerships and industrial collaborations, a key component in enhancing skills and practical experience among TVET graduates.

II. OBJECTIVES OF THE STUDY

The following are the objectives of the study:-

- To identify the various forms of collaboration utilized to align TVET curricula with industry demands.
- To assess the strength of partnerships and industrial collaborations between TVET institutions and industries in Kakamega County.
- To examine the challenges faced by TVET institutions and industries in establishing and maintaining successful partnerships and collaborations.

III. RESEARCH QUESTIONS

The following were the research questions:-

- What are the various forms of collaboration utilized to align TVET curricula with industry demands?
- What are the strengths of partnerships and industrial collaborations between TVET institutions and industries in Kakamega County?
- What are the challenges faced by TVET institutions and industries in establishing and maintaining successful partnerships and collaborations?

IV. LITERATURE REVIEW

Ali et al., 2019 on the identification of key factors in the link and match between TVET with industries stated partnerships as one of the factors. The partnership and collaboration with industries have a major influence on national growth and development. They suggested that these collaborations can be done through: curriculum development, industrial visits, involving experts from the industries in training, seminars and workshops, industrial attachments of trainees, capacity building of trainers in industries, and training of industrial staffs in TVET institutions. Partnerships and collaborations with industries enhance the acquisition of practical skills among trainers and trainees in TVET institutions.

The studies conducted by Dasmani, 2011 found that weak industrial linkages between TVET institutions and industries were adversely affecting the delivery of hands-on experience among trainers and trainees. This culminated in producing TVET graduates with insufficient practical skills to enable them to fit well into the job market. To mitigate this, he recommended that TVET institutions should promote industrial attachment programs for both trainers and trainees. Trainees are enrolled in TVET institutions for various courses to get the necessary competencies that will enable them to get employment. The employment could be either self or by industries. For this to happen, these institutions must provide the appropriate skills that match the demands of various industries. It's through strong partnerships and collaborations with industries that the acquisition of practical skills will be enhanced among TVET graduates.

The concept of workplace training in TVET. According to the Australian National Training Authority (2003), workplace training is training conducted in the place of work, under normal workplace conditions. Workplace training is also defined as training that occurs at the workplace based on the guidance of the more experienced industrial staff and includes participation in specific projects. By involving industries in the acquisition of skills, trainers, and trainees will be able to acquire practical skills. Why can we have workplace training for both trainers and trainees? This training will enable trainers to be conversant with the dynamics at the workplace. It will also bridge the skill gap between what is learned in school and what is done at the workplace. TVET institutions can have some of the practical lessons being conducted at the workplace under the supervision of industrial employees. In examining the best practices in TVET School– workplace collaboration, Oviawe et al, 2017, recommended that it should be mandatory for TVET institutions to establish effective and sustainable partnerships with the industries.

Related studies by Sharma, 2015, noted that skill development programs involve collaboration with industries and enterprises. In developing countries like Kenya, much stronger linkages between TVET institutions and industries are key in making the system responsive to growing skill

demand. In Kenya, the industrial attachments are coordinated by a state agency National Industrial Training Authority (NITA). The government works through the agency to enhance industrial training in the country.

According to Marope et al, 2015, the collaboration between TVET institutions and industries requires some legal framework that will ensure that the parties stick to their commitment to training and acquisition of skills. Regulations that will require industries to declare their needs to the TVET institutions, give information on the new technologies, knowledge, and skills, offer scholarships to trainees to study in TVET institutions and be ready to employ them after training.

On the challenges with partnerships and collaborations, Singh and Tolessa, 2019, their study revealed a lack of operational capacity in the industries as a problem in the implementation of cooperative training. It is also difficult for TVET institutions to get suitable industries for their programs. This is an indication that there is a need to examine the industries. These industries require the capacity to influence training and acquisition of skills.

In collaboration with industries, the studies by Obwoye et al, 2013, revealed that the main form of partnerships existing between TVET institutions and industries among TVET institutions in Nairobi province, Kenya, was on attachments. The majority of TVET institutions only collaborate with industries to support trainees' industrial attachments. They recommended the government of Kenya set up policies for compulsory linkages between TVET institutions and Industries for all industries. For there to be wholesome skill development, it is necessary to expand on how TVET institutions form partnerships with industries. The partnerships should support both the trainee and the trainer towards enhancing practical skills.

V. RESEARCH METHODOLOGY

This study adopted a descriptive survey. The questionnaires were used to collect data from the heads of TVET institutions, ILOs, and the employers of TVET graduates. The data obtained was analyzed using descriptive statistics such as frequencies and percentages. The qualitative data was analyzed thematically and the result was presented using narrations, quotations, tables, and charts.

VI. RESULTS

This study was based on three objectives: therefore, in this section, the discussion on the existence of partnerships and collaborations, the strength of these partnerships, and finally the challenges TVET institutions and industries face in establishing partnerships and collaborations is done.

➤ *Does partnerships exist between TVET institutions and industries?*

The participants who were 35 ILOs and 50 representatives from various industries were asked to state

whether their institutions or companies have established partnerships and collaborations. This was a “Yes” or “No” question. The results were as summarized in the table 1 and 2

Table 1: Responses of ILOs on whether their institutions have partnerships with industries

Do you have partnerships with industries?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	15	42.9	42.9	42.9
	No	20	57.1	57.1	100.0
	Total	35	100.0	100.0	

The results show that, out of the 35 ILOs, 20 (57.1%) responded that their institutions don't have partnerships with industries. 15 (42.9%) of the ILOs said that their institutions

have established partnerships with industries. This indicates that the majority of TVET institutions have not established partnerships with industries.

Table 2: Responses of employers on whether they have partnerships with TVET institutions

Do you have partnerships with TVET institutions?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	18	36.0	36.0	36.0
	No	32	64.0	64.0	100.0
	Total	50	100.0	100.0	

The results show that, out of the 50 representatives of employers who participated in the study, 32 (64%) said that they don't have partnerships with TVET institutions while 18 (36%) said that they have partnerships with TVET institutions. This indicates that the majority of industries have not established partnerships with TVET institutions.

➤ *Forms of partnerships and collaboration between TVET institutions and industries*

Here, the participants were asked to state various forms of partnerships that exist between their organizations. These forms were categorized into four namely: joint ventures, attachments, apprenticeships, and exchange programs. The results are summarized in Tables 3 and 4 below.

Table 3: Responses from ILOs on forms of partnerships with industries

Forms of partnerships with industries					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Joint ventures	2	13.3	13.3	13.3
	Attachments	9	60.0	60.0	73.3
	Apprenticeships	3	20.0	20.0	93.3
	Exchange programs	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

The results show that, out of the 15 ILOs who said that their institutions have partnerships with industries, 9 (60%) said that the partnerships were in the form of attachments for their trainees, 3 (20%) said the partnerships were in the form of apprenticeships, 2 (13.3%) said the partnerships

were in form of joint ventures and 1 (6.7%) said that the partnerships were in form of exchange programs. This indicated that the main form of partnerships existing between TVET institutions and industries in Kakamega County is attachments.

Table 4: Responses from employers on forms of partnerships with TVET institutions

Forms of partnerships with TVET institutions					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	joint ventures	3	16.7	16.7	16.7
	attachments	9	50.0	50.0	66.7
	Apprenticeships	4	22.2	22.2	88.9
	Exchange programs	2	11.1	11.1	100.0
	Total	18	100.0	100.0	

The results show that out of the 18 representatives of employers who said that their companies have partnerships with TVET institutions, 9 (50%) said that the partnerships

were in the form of attachments for their trainees, 4 (22.2%) said the partnerships were in form of apprenticeships, 3 (16.7%) said the partnerships were in

form of joint ventures and 2 (11.1%) said that the partnerships were in form of exchange programs. This indicated that the main form of partnerships existing between industries and TVET institutions in Kakamega County is attachments.

➤ *Strength of partnerships*

On the strength of partnerships, the participants were asked to rate the statements on a scale of 1 to 5, 1 being the lowest and 5 the highest. The statements were: Industries strongly support trainees' attachments and internships, the industries strongly involved in trainers in capacity building, industries support TVET through the sharing of tools and equipment, industries offer scholarships to TVET trainees and industries support the employment of TVET graduates. The results are shown in the table 5 and 6 below.

Table 5: Responses of ILOs on the strength of partnerships between TVET institutions and industries

Statements	SA		A		N		D		SD		Mean	Decision
	f	%	f	%	f	%	f	%	f	%		
Trainees attachments	1	6.7	3	20	3	20	8	53.3	0	0	2.80	Agree
Trainers capacity building	0	0	1	6.7	0	0	11	73.3	3	20	1.93	Disagree
Sharing of equipment	0	0	1	6.7	2	13.3	10	66.7	2	13.3	2.13	Disagree
Scholarships to trainees	0	0	0	0	2	13.3	2	13.3	11	73.3	1.44	Disagree
Employment of graduates	0	0	5	33.3	10	67.7	0	0	0	0	3.33	Agree
Average score											2.33	Disagreement

The results in Table 5 show that:

In terms of the support on attachments, the responses of the ILOs gave a mean of 2.80 indicating that they agreed that the industries were supporting TVET institutions in providing places for trainees' industrial attachments. In terms of the contribution of the industries towards the capacity building of trainers, ILO responses gave a mean of 1.93 indicating that the industries in not supporting trainers in terms of capacity building. The responses on sharing of equipment by the industries, the responses gave a mean of 2.13 indicating a disagreement that the industries share

equipment with TVET institutions. On the issue of scholarships, the responses from the ILOs show the disagreement that industries do not offer scholarships to trainees. On the issues of employment of TVET graduates, the ILO's responses gave a mean of 3.33 indicating that they agreed that the industries are offering employment opportunities to the TVET graduates. Finally, the overall mean for the strength of industrial partnerships shows that there is a weak strength. TVET institutions in Kakamega County have weak strength in partnerships and collaborations with industries.

Table 6: Responses of the employers on the strength of partnerships between industries and TVET institutions

Statements	SA		A		N		D		SD		Mean	Decision
	f	%	f	%	f	%	f	%	f	%		
Trainees attachments	7	46.7	3	16.7	3	16.7	5	27.8	0	0	3.67	Agree
Trainers capacity building	0	0	1	5.6	1	5.6	13	72.2	3	16.7	2.00	Disagree
Sharing of equipment	0	0	1	5.6	2	11.1	11	61.1	4	22.2	2.00	Disagree
Scholarships to trainees	0	0	0	0	2	11.1	5	27.8	11	61.1	1.50	Disagree
Employment of graduates	0	0	7	46.7	11	61.1	0	0	0	0	3.39	Agree
Average score											2.51	Disagree

The results in Table 5 show that:

In terms of the support on attachments, the responses of the employers gave a mean of 3.67 indicating that they agreed that their companies were supporting TVET institutions in providing places for trainees' industrial attachments. In terms of the contribution of the industries towards the capacity building of trainers, employers' responses gave a mean of 2.0 showing disagreement and indicating that the industries are not supporting trainers in

terms of capacity building them. The responses on sharing of equipment by the industries, the responses gave a mean of 2.0 indicating a disagreement that the industries share equipment with TVET institutions. On the issue of scholarships, the responses from the employers show the disagreement that industries do not offer scholarships to trainees. On the issues of employment of TVET graduates, the employers' responses gave a mean of 3.39 indicating that they agreed that the industries are offering employment opportunities to the TVET graduates. Finally, the overall

mean for the strength of industrial partnerships shows that there is a weak strength. TVET institutions in Kakamega County have weak strength in partnerships and collaborations with industries.

➤ *Challenges with partnerships and industrial collaborations*

This was an open-ended question where the participants were asked to state the challenges their institutions face with partnerships and collaborations. The data was analyzed thematically and the results were as summarized in the table 7 and 8 that follows:-

Table 7: ILO responses on the challenges TVET institutions face in partnerships and collaborations

Challenges TVET institutions face in partnerships with industries					
	Themes	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Financial constraints	14	40.0	40.0	40.0
	Insufficient policies	4	11.4	11.4	51.4
	Lack of industries	3	8.6	8.6	60.0
	lack of commitment from industries	1	2.9	2.9	62.9
	Misunderstanding from industries	13	37.1	37.1	100.0
	Total		35	100.0	100.0

From the ILO's responses, the majority 14(40%) gave views that were related to financial challenges. Some quotes were as "most of these industries are far and require facilitation for the frequent visits, this requires money which in most cases is not there" and "some of the industries require trainees to have special tools which also need funding from the institutions". The result also shows that 13 (37.1%) of the ILOs stated the challenge of lack of understanding by the industries on their role in enhancing

the training of trainees. Quoting some of the responses "Some employers want to demand payment for offering attachments to our trainees, especially in the informal sector". This is a clear indication that the industries do not fully understand their role in enhancing skills acquisition. A small number of ILOs stated insufficient policies, lack of commitments from the industries, and a lack of industries to facilitate training.

Table 8: Employers' responses on the challenges industries face in partnerships and collaborations with TVET institutions

Challenges industries face in partnerships with TVET institutions					
	Themes	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Financial constraints	19	38.0	38.0	38.0
	Insufficient policies	6	12.0	12.0	50.0
	Lack of capacities	4	8.0	8.0	58.0
	lack of commitment from TVET institutions	3	6.0	6.0	64.0
	Misunderstanding from TVET institutions	18	36.0	36.0	100.0
	Total		50	100.0	100.0

From the employer's responses, the majority 19(38%) gave views that were related to financial challenges. Some quotes were as "We incur a lot of losses with attaches, like damages of tools and equipment which requires repairs and sometimes buying new ones and we don't have the capacity for many trainees due to insufficient funds or capital". The result also shows that 18 (36%) of the employers stated the challenge of lack of understanding by the TVET institutions on how we should participate in enhancing the training of trainees. Quoting some of the responses "Most TVET institutions just dump their trainees here during attachment, and don't understand what we go through with their trainees". This indicates that the TVET institutions do not fully understand how the industries should take part in enhancing skills acquisition. A small number of employers stated insufficient policies, a lack of commitments from the industries, and a lack of industries to facilitate training.

VII. DISCUSSIONS OF RESULTS

The study revealed the following:-

The majority of TVET institutions and Industries in Kakamega County do not have formal partnerships and collaborations with each other to support training and enhance skills.

The main form of partnerships that exists between TVET institutions and industries in Kakamega County are attachments. There was a strong connection in terms of offering attachment opportunities to the TVET trainees. The findings agree with those of Obwoye et al, 2013 which shows that the main form of partnerships in TVET institutions in Nairobi were in terms of attachments.

There was a weak strength of partnerships between TVET institutions and industries in Kakamega County.

On the challenges TVET institutions and industries face concerning partnerships and collaborations, the main challenges that were raised were finances and a lack of understanding of the roles of the industries towards training.

VIII. CONCLUSION

In conclusion, the role TVET institutions and industries play in the growth and development of the country's economy cannot be underrated. This means that all stakeholders need to gang up to ensure their smooth operations in these institutions. A well-established TVET institution and an industry will be in a good position to influence the transformation of the country's workforce. All players in the TVET sector need to support these institutions.

RECOMMENDATIONS

The study recommends the following:-

- TVET institution administrators in Kakamega County need to pull up their socks and ensure that there are well-established partnerships with industries. They should establish and enhance other forms of partnerships with industries. These could be in terms of equipment sharing, capacity building of trainers through exchange programs, scholarships for trainees, and cost-sharing.
- TVET administrators and representatives from industries need to come up with the appropriate ways of engagement they should have a meeting to iron out their contributions towards training and skills enhancement. They should establish a clear communication line that ensures that will ensure that they speak the same voice.
- The government and all stakeholders should establish policies on mandatory partnerships between TVET institutions and industries clearly stating their roles accompanied by the appropriate compensations.

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