

Partnership In Curriculum Development and Performance of Public Technical Vocational Education and Training Institutions In South Rift Region, Kenya

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Abstract: Companies across sectors are struggling to find suitable candidates for job vacancies because the TVET courses offered at various training institutions often do not meet the requirements of the private sector. However, there are limited studies in the Kenyan context focusing on the impact of public private partnership in curriculum development on the performance of TVET institutions. In this regard the current study has been designed to investigate the impact of public private partnership in curriculum development on performance of public Technical Vocational Education and Training Institutions in South Rift Region, Kenya. In a bid to effectively achieve this, the study adopted an Explanatory Sequential research design based on samples drawn from across the TVET institutions in South Rift Region which have public private partnership in their respective institutions. The target population was 470 trainers who included trainers of mechanical engineering departments, electrical engineering departments, building departments, management representative of TVET institutions in South rift region. Cluster, stratified random and sampling simple random technique was used. A sample size of 214 was drawn from a total population of 470 trainers. Data was collected by use of interview schedules and questionnaires from the respondents and analysed by use of simple linear regression and descriptive statistics eg frequencies, standard deviation, means using SPSS version 25. From the findings curriculum development explained 41.7 per cent variation on Performance of public Technical Vocational Education and Training Institutions From the regression coefficient β values for Curriculum development (0.433). In the qualitative analysis of interviews, the findings showed that the public TVET institutions adopted private public partnership in curriculum development to ensure performance of public TVET institutions. The study therefore concludes that PPPs in curriculum development positively and significantly affect performance of public TVET institutions. The study therefore recommends Therefore, there is need for strengthening private public partnership curriculum development to improve the performance of public TVET institutions.

Keywords: Curriculum Development, Partnership and Performance of TVET

I. INTRODUCTION

Globally, Technical Vocational Educational Training (TVET) sector remains a cornerstone for social-economy development and a driver for the attainment of the Sustainable Development Goals (SDGs). Therefore, promoting the performance of TVET institutions through their Link with industry to form learning partnerships is inevitable. However, the effectiveness of TVET in meeting labour-market needs depends critically on strong linkages between training institutions, employers and policy actors so that curricula, teaching resources and assessment reflect current industry standards and emerging technologies. National reviews and sector reports have repeatedly identified the strategic role of multi-actor collaboration including public-private partnerships (PPPs) in realigning TVET to labour-market requirements (Koros, 2021).

Thus, the improvement of performance of TVET institutions remains critical in any economy owing to their contribution to economic dynamism by tapping the resources of people as well as enterprises. This is further justified by the growing need for a more competent and competitive workforce, as well as the costs connected with the provision of technical vocational education. Therefore decision-makers in TVET should continuously compare the success of newly devised curricula to older well-established TVET programs besides the emerging skill requirements by the private and private sector (Liu & Clayton, 2016). Performance metrics for TVET includes the alignment of high-quality TVET programs with labor market needs to equip students with 21st-century skills and prepare them employment in high-growth industry sectors, stronger collaborations private sector, improving academic outcomes among the performance metrics in TVET.

A greater emphasis on innovation supported by systemic reform of state policies and practices to support TVET implementation of effective practices at the local level.

Additionally, most enterprises are 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 inservice the teachers/trainers besides donating some equipment for training purposes. According to (Mitchell, 1998) cited in Keter (2020) 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. Besides, every economy advocates for a curriculum that is aligned to labour market demands. This eulogizes the place of private partnerships (PPPs) in curriculum development. Strengthening PPPs in curriculum development is therefore a policy-relevant lever to close the skills gap, increase graduate employability, and support sectoral competitiveness. Given persistent evidence of mismatch across contexts in the 2020–2025 period, systematic research on the mechanisms, barriers and enablers of effective PPPs for curriculum development is urgent. Remington (2018) notes that through public private partnership in TVET management, the incessant skills shortage of industry demand in national or regional labor market can be significantly addressed. Thus, to make vocational education more relevant for industry needs, both education providers and private businesses have to systematically exchange information on the development of local labour markets including future human resource and competency demands.

In spite of this, companies across sectors are struggling to find suitable candidates for job vacancies because the TVET courses offered at various training institutions often do not meet the requirements of the private sector. This is occasioned by the inadequate public private partnership amongst TVET institutions which has resulted in TVET offering curriculum that is not relevant to labour market requirements. However, there is a gap between policy rhetoric and classroom reality (Atai & Mazlum, 2013). Thus, a hue and cry about the poor link between vocational, general education and labor market an index of poor performance. Poor performance of TVET is reflected in terms of Skills shortages occasioning recruitment difficulties and skills gaps among existing workers (Navy & Siem, 2017). The problem is further precipitated by the skills gap between TVET graduates and industry needs. Therefore, strengthening the partnership between TVET institutions and private sector is one of the solutions to minimize the skills gap and reengineer the performance of TVET institutions. Many TVET institutions have established partnerships with the industry because TVET is too expensive for any Government to provide by itself (Widiastuti, Saputra, Noviansyah & Trianingsih, 2021). Thus, the key is to give industry incentives to become part of skills development, not just invest their own money but their time as well.

However, Manyonge and Kyalo (2020) notes that 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. Thus, policymakers have eulogized the need for public private partnership in TVET training to provide expected skills for integration into the labor market. This intends to gear TVET from a supply-driven orientation to a demand-driven orientation through adopting a PPP approach. In this regard the Kenyan government and the private sector are collaborating to ensure that the curriculum developed by Sectors Skills Advisory Committees (SSACs) is aligned to the competencies required for national development. Despite the many changes introduced, TVET continues to face a myriad of challenges compromising on its performance. The education sector in Kenya faces many challenges financial, physical and human resources. Besides, the present TVET system doesn't effectively prepare graduates to respond to employers' expectations by adopting to the radically changing needs of the labour market. Despite these challenges the government has not fully embraced Public-Private Partnership (PPP) in education. If this trend is allowed to continue then the realization of Africa We Want Agenda 2063 aspirations through technical and vocational education and training (TVET) would be a mirage. Therefore ensuring commitment from the public and private sector in investing in TVET remains Key. However there are limited studies in the Kenyan context focusing on the impact of public private partnership in curriculum development on the performance of TVET institutions in South Rift Kenya providing a gap for the current study. Thus the purpose of the study was to investigate the impact of public private partnership in curriculum development on performance of public Technical Vocational Education and Training Institutions in South Rift Region, Kenya.

II. LITERATURE REVIEW

Partnership in curriculum development and performance of public Technical Vocational Education and Training Institutions

Inadequate collaboration between TVET institutions and industry result in TVET curricula of low quality and relevance to the needs of stakeholders. However, there are changes in the workplace for the employees, employers and educational institutions, thus the required competences of the workforce are changing increasingly rapidly. Dynamic work-integrated

curriculum has the potential for productive outcomes by allowing learners to quickly contextualize the study content within the functional environment of the workplace, and develop field-specific and self-regulated learning competences through work-integrated learning study process. Besides partnering to create programs, cooperation is needed to establish new teaching paradigms for developing employees' competences for manufacturing environments or future skills that don't exist yet, as traditional teaching methods only have limited effects. There is a need to improve the quality and relevance of education and making education and training more attractive by strengthening work-based learning in collaboration with industry partners. Widiastuti, et al, (2021) partnership in curriculum development enables TVET providers to learn what skills are in demand and to train for jobs that change regularly and allows employers to have input into the curriculum of TVET and often gives them a recruiting tool to attract skilled workers. Thus partnership in curriculum development affects performance of TVET institutions

According to UNESCO., (2020) Modern and effective TVET systems deliver and operate their courses and programs according to occupational standards (OS). Occupational standards specify what a person should know and be able to do in order to effectively carry out the functions of a particular job at the workplace. They are in general defined by private sector stakeholders, who know the skills requirements and conditions in the industry. According to Power (2014), there is pressure for TVET institutions to work within collaborative partnerships to develop appropriate curriculum in line with government priorities for change. Studies on the nature of collaboration and partnership in curriculum development have found that the critical success factors include a clear articulation of the aims of each of the stakeholders taking part in the project and convergence of those aims towards a common purpose (Clegg & McNulty, 2002; Foskett, 2005). An essential part of the curriculum development process when working in collaborative partnerships is the development of trust and openness in the working relationship. Samson, (2019) adds that participatory collaboration involving multi-stakeholder engagement generates opportunities for creativity and innovation in curriculum planning, building partnerships between students, teachers, institutions, and communities. Konings, Seidel and van Merriënboer, (2013) suggested that integrating the diverse expertise of multiple stakeholders in the education process can improve the quality of the curricular design process and the learning spaces they generate.

Competency based education and training provides particular challenges due to the nature of collaboration and partnership. Voogt, Pieters, and Handelzalts, (2016) explored what empirical evidence is available about processes that take place when teachers co-design and how these contribute to professional development and curriculum change. Results showed that effects of curriculum design teams, in terms of learning outcomes for teachers in areas such as (pedagogical) content knowledge and design knowledge and skills, became manifest in the outcomes of the curriculum design process, and in the appreciation by the stakeholders.

According to Nyerere (2009) TVET system in Kenya is characterized by weak curriculum that is not flexible enough to meet the technological changes and diverse needs of different clients, poor instructional methods, outmoded/inadequate training equipment and lack of meaningful work experience and supervision during attachment. As a result, the quality of TVET graduates has continued to decline in recent years to an extent where graduates of TVET experience technology shock when they finally enter the job market partnership between TVET and industry players is beneficial to both parties.

III. RESEARCH DESIGN AND METHODOLOGY

Research Design: The current study employed an explanatory research design. According to Casula, Rangarajan, and Shields, (2021) explanatory sequential research focuses on 'why' questions. In answering the 'why' questions, the study would develop explanations. The explanations argue that phenomenon Y (public private partnership) is affected by variable X (performance of public Technical Vocational Education and Training Institutions) and even showed the extent of the effect.

Study area: The study was conducted in selected TVET institutions in South Rift region of Kenya. South Rift region covers the six counties namely: Samburu, Baringo, Nakuru, Kericho, Bomet and Narok. The main reason for this choice is that public TVET institutions in South Rift region portray typical characteristics of TVET institutions in Kenya, which consist of National polytechnic, Institute of technology and technical training institutions and thus the findings of the study can be generalized to all TVET institutions in Kenya.

Population of the Study: The target population was 470 trainers of mechanical electrical building and civil engineering departments and management representatives of all the TVET institutions in South Rift Region.

Sample size: In this study selection of TVET institutions in South Rift Region was done purposively. A sample size of 214 was drawn from a total population of 470 trainers using Krejcie and Morgan table 1970. The sample size was distributed proportionally according to Neyman's allocation formula.

Data Collection Instruments: Both questionnaires and interviews schedules were used to collect the primary data.

Data Analysis Procedure: Quantitative data was analyzed using descriptive (mean, standard deviation, frequencies, skewness and kurtosis). Under inferential statistics, simple linear regression was used to determine the effect of independent variable (Public Private Partnership in curriculum development) on dependent variable (performance of TVET institutions), coefficient of correlation using the Statistical Package for Social Sciences (SPSS) version 25.0 package.

The regression model was as follows:

$$y = \beta_0 + \beta_1 X_1 + \epsilon \dots \dots \dots \text{Equation 3.1}$$

Where y represented performance of TVET institutions which was the dependent variable x represents the public private partnership in curriculum development dimensions β is the standardized regression coefficient. qualitative data analyses was based on themes.

IV. DATA ANALYSIS, RESULTS FINDINGS AND DISCUSSION

4.1 Partnering in Curriculum Development in Public Technical Vocational Education and Training Institutions

The study focused on aspects of partnering in curriculum development and findings presented below in table 4.1.

Table 4.1 Descriptive Results on Curriculum Development in Public TVET Institutions

| Statement | N | MIN | MAX | SKEW | KURT | M | SD |
|--|-----|-----|-----|--------|-------|------|-------|
| I participate in forming a shared vision about managing curriculum development activities | 180 | 1 | 5 | -.849 | -.074 | 3.78 | 1.125 |
| Through partnership the engineering curriculum reflects private sector technology and standards | 180 | 1 | 5 | -.692 | -.939 | 3.80 | 1.330 |
| The demands of the community are effectively met by the curriculum through partnership | 180 | 1 | 5 | -.800 | -.256 | 4.00 | 1.083 |
| The learning environment is conducive in the realization of the demands of the curriculum | 180 | 2 | 5 | -.451 | -.591 | 3.73 | .931 |
| The curriculum developed through partnership help students to successfully enter the world of work | 180 | 1 | 5 | -1.093 | .374 | 3.93 | 1.185 |
| Average | | | | | | 3.85 | .621 |

Source: Research Data, (2023)

From the findings in table 4.3 majority of respondents were in agreement that they participate in forming a shared vision about managing curriculum development activities with a mean of 3.78 while some of the respondents were in disagreement with SD of 1.125 (Min=1 Max=5). The responses were symmetrically distributed with Skewness of -.849 and Kurtosis of 1.125. This implies that the curriculum taught in TVET institutions is product of trainers involvement in its development. Besides, majority of respondents were in agreement that through partnership the engineering curriculum reflects private sector technology and standards with a mean of 3.80 while some were in disagreement with a SD of 1.330 (Min=1 Max=5). However, the responses were normally distributed with Skewness of -.692 and Kurtosis of -.939. This implies that what the engineering students are taught in TVET institutions is in line with the industrial demands. Thus, the TVET institutions are partnering with the industry in ensuring that the trainings keep pace with the dynamics of the industry. From the interviews on *Which strategies does TVET use in involving the private sector in curriculum development?* the respondents had this to say:

“.....TVET institutions involve industry experts in conducting regular reviews of curriculum content and course offerings. Industry representatives provide feedback on the relevance of existing programs, identify areas for improvement, and suggest updates to ensure alignment with industry standards and practices”.

Additionally, majority of respondents were in agreement with a mean of 4.00 that the demands of the community are effectively met by the curriculum through partnership while some respondents were in disagreement with a SD of 1.083 (Min=1 Max=5). However, the responses were normally distributed with Skewness of -.800 and Kurtosis of -.256. This implies that the community is taken into consideration during curriculum development so that the knowledge and skills acquired through training are in demand by the community. Majority of respondents were in agreement with a mean of 3.73 that the learning environment is conducive in the realization of the demands of the curriculum while some in disagreement with SD of .931 (Min=1 Max=5). The responses were symmetrically distributed with Skewness of -.451 and Kurtosis of -.591.

Besides, majority of respondents were in agreement with a mean of 3.93 that the curriculum developed through partnership help students to successfully enter the world of work while some were in disagreement and SD of 1.185 (Min=1 Max=5). The responses were symmetrically distributed with Skewness of -1.093 and Kurtosis of -.374. Finally, the statements on partnering in curriculum development in public TVET institutions in South Rift had a mean of 3.85 and SD of .621. This implies that the public TVET institutions have embraced partnering in curriculum development for industry driven knowledge and skills. From the interviewees the response on *How is the private sector important in curriculum development?*

“.....The private sector's involvement in TVET curriculum development is essential for creating relevant, high-quality educational programs that align with industry requirements and prepare students for successful careers”

However, Likisa, (2018) laments that most industry experts who participated in the curriculum development did not have the expertise in models and philosophies of curriculum development.

4.2 Performance of Public Technical Vocational Education and Training Institutions in South Rift Region

The study focused on aspects of performance of Public Technical Vocational Education and Training Institutions and findings presented below in table 4.2.

Table 4.2 Descriptive Results on Performance of Public Technical Vocational Education and Training Institutions in South Rift Region.

| Statement | N | MIN | MAX | SKEW | KURT | M | SD |
|--|-----|-----|-----|--------|-------|------|------|
| Student have complains concerning the quality of training | 180 | 1 | 5 | -.572 | .440 | 3.69 | .741 |
| Trainers have adequate training Materials | 180 | 2 | 5 | -.701 | .412 | 3.82 | .640 |
| The completion rates of engineering students have been on the rise | 180 | 1 | 5 | -1.204 | 1.425 | 3.78 | .811 |
| The skills acquired by the students are on demand by the labour market | 180 | 1 | 5 | -1.093 | 2.085 | 3.58 | .757 |
| There has been an increase on the enrollment of students in engineering courses in the institution | 180 | 1 | 5 | -1.837 | 4.804 | 4.09 | .843 |
| Average | | | | | | 3.79 | .444 |

Source: Research Data, (2023)

From the findings in table 4.5 majority of the respondents were in agreement that student have complains concerning the quality of training with a mean of 3.69 while some were in disagreement with a SD of .741 (Min=1 and Max=5). The responses were normally distributed with Skewness of -.572 and Kurtosis of .440. This implies that the public TVET institutions should continuously address the complains which students raise in terms of quality for them to effectively meet their mandate. Besides majority of the respondents were in agreement that trainers have adequate training materials with a mean of 3.82 while some were in disagreement with a deviation from the mean with a SD of .640 (Min=2 and

Max=5) but responses normally distributed with Skewness of -.7109 and Kurtosis of .412. This implies that TVET institutions have progressively improved on the provision of materials for trainers so that they can effectively impart requisite knowledge and skills. Besides majority of the respondents were in agreement that The completion rates of engineering students have been on the rise with a mean of 3.78 with a deviation from the mean of .811 (Min=1 Max=5). Additionally, majority of respondents agree with a mean of 3.58 that the skills acquired by the students are on demand by the labour market with a SD of .757 (Min=1 Max=5). The responses were symmetrically distributed with Skewness of -1.093 and Kurtosis of 2.085. From the interviews on what are the inputs of the public-private partnership in promoting the performance of the public TVET institutions?

“.....Private sector input helps ensure that TVET programs align with current industry needs, trends, and standards. This alignment enhances the employability of graduates and addresses skills gaps in the labor market”

Another respondents noted that

“.....PPPs encourage collaboration between public TVET institutions and private sector partners in research and innovation initiatives. Joint research projects, technology transfer programs, and innovation hubs promote knowledge exchange, technology adoption, and entrepreneurship”

Besides, majority of the respondents were in agreement with a mean of 4.09 that there has been an increase on the enrolment of students in engineering courses in the institutions while some were in disagreement with a standard deviation of .843. (Min=1 Max=5). In general, the statements on performance public TVET in institutions had a mean of 3.79 and SD of .444. This implies that the private sector public TVET institution partnership should be strengthened for maximal performance. The government should encourage the private sector’s participation in the delivery of Technical Vocational Education and Training.

4.3. Regression Analysis

Table 4.3: Impact of public private partnership in curriculum development on performance of public Technical Vocational Education and Training Institutions in South Rift Region, Kenya

| | Standardized Coefficients | | Standardized Coefficients | | |
|---------------------------------|---------------------------|-------|---------------------------|--------|------|
| | B | Error | Beta | t | Sig. |
| (Constant) | 2.282 | .200 | | 11.394 | .000 |
| Curriculum dev | .433 | .045 | .646 | 9.721 | .000 |
| Model Summary statistics | | | | | |
| R | .646 ^a | | | | |
| R Square | .417 | | | | |
| Adjusted R Square | .413 | | | | |
| Std. Error of the Estimate | .348 | | | | |
| R Square Change | .417 | | | | |
| Good of fit statistics | | | | | |
| ANOVA (F stat) | 127.011 | | | | |
| df1 | 1 | | | | |
| df2 | 178 | | | | |
| ANOAV (F prob) | 0.000 | | | | |

a **Dependent Variable:** Performance of public Technical Vocational Education and Training Institutions

Source: Research Data, (2023)

From the model summary of multiple regression model, the results showed that the predictor (Curriculum development) explained 41.7 per cent variation on Performance of public Technical Vocational Education and Training Institutions. This showed that considering the independent variable, there is a probability of 41.7% ($R^2=0.417$) in predicting performance of public Technical Vocational Education and Training Institutions. The F-value of 127.011 and a p-value of 0.00 significant at 5% level of confidence indicate that the overall regression model is significant; hence, the contribution of the independent variable was significant in predicting performance of public Technical Vocational Education and Training Institutions is likely to improve. Therefore, public private partnership curriculum development significantly impacts on performance of public Technical Vocational Education and Training Institutions.

$$Y = 2.282 + 0.433X_1 + \varepsilon, \dots\dots\dots \text{Equation 1}$$

Where:

X_1 = Curriculum dev

Following is the testing of research question:

How does partnership in curriculum development impact on performance of public Technical Vocational Education and Training Institutions in South Rift Region, Kenya?

From the findings in Table 4.10 showed that partnership in curriculum development had coefficients of estimate which were significant basing on $\beta_1 = 0.433$ ($t = 9.721$; $p\text{-value} = 0.000$ which is less than $\alpha = 0.05$). Thus, the research question was answered that partnership curriculum development has a positive and statistically significant impact on performance of public Technical Vocational Education and Training Institutions in South Rift Region, Kenya. This suggests that there is up to 0.433 unit increase on performance of public Technical Vocational Education and Training institutions for each unit increase in partnership in curriculum development. Therefore, with effective partnership in curriculum development, the performance of public Technical Vocational Education and Training Institutions can be enhanced.

These findings are supported by Widiastuti, et al, (2021), Manyonge and Kyalo, (2020) UNESCO., (2020) who also found that the collaboration between TVET institutions and the workplace during curriculum development to address the needs of the industries enhances their performance. The findings are based on stakeholders' theory. In this regard any there is need of involvement of stakeholders during curriculum development so that their interests are effectively catered for. Involving stakeholders ensures that the curriculum is relevant to the real world and applicable to students' lives beyond the classroom. Industry professionals can provide insights into current trends, skills, and knowledge required in the workforce, while parents and community members can offer insights into local needs and priorities.

Different stakeholders bring different expertise and perspectives, which helps identify potential flaws or areas for improvement in the curriculum. Samson, (2019) Kusmin, Tammets, and Ley (2018) affirms that participatory collaboration involving multi-stakeholder engagement generates opportunities for creativity and innovation in curriculum planning, building partnerships private sector. Industries are part of the immediate environment and therefore with a curriculum that does not borrow much from it, there is a likelihood that graduates from such a training arrangement would struggle to fit into the immediate labour market. The industry should provide contemporary skills by training and establish networks with TVET institutions for minimizing the gaps.

V. CONCLUSION

The study explored the impact of private-public partnerships in curriculum development on performance of public TVET institutions in South Rift Region, Kenya. The study concludes that private-public partnerships in terms of curriculum development is key in enhancing performance of public TVET institutions in South Rift Region Kenya. It therefore calls for the public TVET institutions to focus on strengthening the private-public partnerships in curriculum development to enhance their performance. The private sector's involvement in TVET curriculum development is essential for creating relevant, high-quality educational programs that align with industry requirements and prepare students for successful careers. This is justified by the fact that the Private sector has access to relevant information about development and skills needs, and to updated equipment and specialized staff with updated qualifications.

VI. RECOMMENDATION

In view of the findings of the study and the guidance from the literature review, it is apparent that the performance of public TVET institutions should be enhanced through private-public partnerships in curriculum development. While there are other factors crucial for the performance of public TVET institutions; from the results in this regard, the current study makes the following recommendations. Based on the dynamics of the labour market there should be continuous Collaboration between the government, TVET institutions, and industry stakeholders to align the curriculum with industry demands and promote seamless transitions from education to employment through a dual training system where students learn more at the industry. The trainers should participate in forming a shared vision about managing curriculum development activities. The curriculum taught in TVET institutions should be a product of trainers involvement in its development. Additionally the community is taken into consideration during curriculum development so that the knowledge and skills acquired through training are in demand by the community.

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