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Original Paper

Institutional Factors Influencing Acquisition of Vocational Skills by Trainees in Public Vocational Training Centers in Kakamega County-Kenya

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Abstract

Vocational Training Centers (VTCs) are anchored in the Technical Vocational Education and Training ACT (2013), which emphases on imparting vocational and technical skills in trainees. The purpose of this study was to determine the institutional factors influencing acquisition of vocational skills by trainees in public vocational training centres in Kakamega County. The study adopted a descriptive survey. The target population of the study was 1740 comprising of 60 county polytechnic, 60 county polytechnic principals, 480 instructors and 1200 second year finalist trainees. A sample size of 282 was picked consisting of 18 county polytechnic principals, 144 instructors and 120 second year finalist trainees as the respondents. Stratified random, purposive and simple random sampling was employed. Questionnaires were used to collect data from county polytechnic principals, instructors and trainees. Data were analyzed using both descriptive and inferential statistics. The study established that instructors were inadequate and the existing ones lacked in-service and industrial updates, financial resources were also inadequate to cater for training facilities and payment of more Board of Management instructors, tools and equipment were inadequate and not up to date and this forced instructors to use teacher-centered methods of instructing.

Keywords

institutional factors, vocational skills acquisition, trainees, public VTCS

1. Introduction

Kenya has laid a great emphasis on TVET as one of the vehicles for socio-economic and technological transformation especially in the realization of her Vision 2030 (Kerre, 2010). However, the skill gap is

worrying trend in the country and lack of quality vocational training in vocational education and training institutions, VTCs inclusive, has been cited as a major reason why graduates are unable to fit in the labour market forcing employers to spent a lot of funds to retrain them (FKE report, 2018). This wanting practical skills may deter the county's ambition of realizing Sustainable Development Goal (SDGs) no. 4 and the goal of vision 2030.

Vocational training centres provide avenue for Technical and Vocational Education and Training (TVET) which is broadly defined as; education aimed at leading students to acquire practical skills, know-how and understanding which are necessary for employment in a particular occupation, trade or group of occupations (Atchoereria & Delluc, 2001). Technical and Vocational Education and Training has also been identified as 'essential for enhancing economic competitiveness and for contributing to social inclusion, poverty reduction and sustainable development' in modern societies (UNESCO, 2006). Vocational Training Centres (VTCs) are expected to provide relevant skills to the trainees for self-employment or supply of skilled human resource for the industry. Unfortunately, the existing institutional infrastructure, staffing capacity, financing mechanisms and instructional strategies in most public VTCs are inadequate to effectively produce high quality graduates (Kakamega County Education Task Force Report, 2014). Moreover, the VTCs in Kakamega county were underfunded coupled with inconsistency in disbursement-VTCs have never received 100% capitation funds which is their major source of income and this has negatively affected their training programs.

According to Kakamega County Director Vocational Education office report 2018, there was low acquisition of vocational skills by trainees due to institutional factors among other factors. This has a negative impact on the quality of graduate being channeled to labour market. Little empirical evidence exists on institutional factors influencing quality training of students in vocational training centers in Kakamega County. It is against this gap that this study sought to investigate the institutional factors influencing acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

2. Study Objectives

The study was guided by the following objectives;

1) To establish the influence of instructors' capacity on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

2) To ascertain the influence of financial resources availability on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

3) To establish the influence of training facilities on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

4) To examine the influence of instructional strategies on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

2.1 Hypothesis

H_{01} Instructors' capacity has no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

H_{02} Financial resources have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

H_{03} Training facilities have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

2.2 Methods

To establish the influence of instructors' capacity on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

Hypothesis

H_{O1} Instructional strategies have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

A Chi-Square test was carried out to determine the influence of instructional strategies on trainees' acquisition of vocational skills as shown on Table 1 below.

Table 1. Testing Hypothesis

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.987a	18	0.029
Likelihood Ratio	38.221	18	0.004
Linear-by-Linear Association	8.652	1	0.003
N of Valid Cases	93		

The results of the study were; $X^2(18, N=93) = 30.99$, $p = .029$. Therefore the hypothesis that instructional strategies have no influence on trainees' acquisition of vocational skills in public vocational training centres was rejected. The test revealed that instructors' academic levels and teaching strategies have a significant impact on the trainees acquisition of vocational skills in public vocational training centers.

International Labour Organization (ILO) report on indicators on quality (2012) pointed out that, the effectiveness of the TVET programmes, which is a measure of the quality of the training, reflects exactly what happens in the classrooms. There is need to consider the educational, occupational background and training of instructors as a proxy for quality. The report further indicated that, re-training and upgrading of instructors skills is vital for the success of TVET which in turn enhances the quality of graduates.

The professional and pedagogical competence of the technical instructor is crucial to the successful implementation of any TVET strategy. Kigwilu and Githinji (2015) revealed that teacher qualifications

and teaching experience have a high influence on the implementation of Artisan and Craft curriculum. More, low qualification of instructors in vocational training centres was one of the major challenges facing vocational training centres in provision of quality education & training. This implies that the TVET institutions should employ more qualified teachers in order to enhance teacher competence in order to spur and sustain students' interest in technical courses.

Nieto (2003) posits that teachers must be trained, prepared for public service and provided with opportunities for professional development. MOEST (2003) report recommended that the government should provide VTC instructors with skill upgrading, in service training and attachment schemes. However, as noted by Kamau (2013), a research carried out in Kiambu Sub County revealed that, majority of instructors in the public vocational institutions under study were inadequately trained or not trained at all in technical trades and pedagogy. Moreover, teachers in Vocational Education and Training (VET) institutions rarely go for in-service trainings (Bourgonje & Tramp, 2011) which is made to enable the practicing teacher to improve on instructional and professional knowledge, skills and interest (Khatete, 2010).

Teachers in VET institutions lack necessary industry-based technological skills updated through industrial attachment (Nyerere, 2009). Similarly, Karemu and Gongera (2014) affirms that teachers in Kiambu County lack exposure to newest technology and therefore teachers need more learning (retraining) because they lack the necessary skills. Both the teachers and students have poor technology awareness and the graduating students lack marketable skills.

Mbugua *et al.* (2012) posited that in Kenya, most TVETs operate with inadequate teaching staff which compromises the quality of teaching and learning since the short fall in the number of teachers is addressed through hiring part-time teachers, multi-grade teaching, and the students individualized learning engagements. The findings concur with Mayabi (2014) revealed that, although, the government has recruited qualified instructors in the VTCs to supplement the ones employed by the BOG, they are still few. Consequently this affects the interactive capacity between the students and the teachers' hence poor quality of training and acquisition of skills. Chelimo (2005) noted that, schools with low teacher-pupil ratio greatly give individual attention to the pupils and there is increased interaction which enables the learners to be motivated. Contrally, Njoki (2014) revealed that in Nairobi County, TVET institutions are understaffed especially in technical disciplines which lead to ill preparation of students for work.

INFLUENCE OF FINANCIAL RESOURCES ON ACQUISITION OF VOCATIONAL SKILLS

The second objective of the study was to ascertain the influence of financial resources availability on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

H_{02}:Financial resources have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

A Chi-Square test was carried out to find whether or not financial resources have influence on trainees' acquisition of vocational skills.

Table 2. Shows Chi-Square Test Output

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	32.308a	18	0.020
Likelihood Ratio	25.228	18	0.119
Linear-by-Linear Association	8.459	1	0.004
N of Valid Cases	18		

The results of the study showed $x^2(18, N = 18) = 32.31, P = 0.02$. Therefore the hypothesis that there is no significant statistical influence of financial resources on trainee's acquisition of vocational skills was rejected.

Inadequate finance investment in instructional training facilities could hinder learning outcomes among students as they could have fewer opportunities to practice with tools and machines (Hicks, Kremer, Mbiti, & Miguel, 2011). In the same vein, Nyerere (2009) observes that several countries, developed and developing such as Italy, Brazil, China, Sweden and Japan have given more recognition to technical, vocational education and training through adequate funding. In Kenya, over the past two decades, TVET institutions have continued to receive less financial allocations from the government than the estimated annual expenditure, a trend which is expected to continue. Consequently, physical facilities are dilapidated and lack maintenance. Equipment used for training in most institutions is outdated while vital aspects of the training support system are wanting with such areas as library acquisitions being relegated to the periphery with negative impact on the quality of TVET programme (Ngome, 2009).

Diaa (2006) reported that finance is one of the basic pillars upon which the educational system depends on in achieving its goals and implementing its plans. However, since independence, TVET subsector has generated little attention and budget provision in Kenya resulting in poor infrastructure and facilities and a low status overall (Ngome, 2003).

In 1980s most countries received inadequate budget towards vocational training thus the vocational institutions introduced cost sharing measures (DFID, 2006) which was made to reduce high public expenditure in education (Otieno, 2004). At basic level, the financing of education and training is the responsibility of the government and parents (Muriithi, 2013). This gave youth polytechnics in Kenya a big blow because technical education is expensive due to tools and equipment required for education and training (Orodho, 2002). Underfunding has led to poor service delivery, poor image and compromised training leading to technology shock of trainees in the labor market (Otieno, 2009).

According to Kenya Education Sector Support Program (KESSP) (GoK, 2005) inadequate funding of the TVET sub-sector has aggravated the situation. Hence, this has led to mismatch between the skills learned and the skills demanded by the industries, inadequate physical facilities for training coupled

with lack of sufficient modern equipment and expensive training materials and textbooks.

The third objective of the study was: To establish the influence of training facilities on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

H_{03}: Training facilities have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

Likert Scale was used to collect responses from School Principals on VTCs' adequacy of training facilities, relevance of tools and equipment, availability of standard workshops and classrooms, provision of adequate and relevant instructional materials, availability of relevant source of power to the courses offered and lastly on availability of up to date tools and Equipment.

Majority of principals 44.4% strongly disagreed that VTCs have adequate training facilities, 5.6% agreed while 16.7% were neutral. On relevance of tools and equipment 44.4% of principals strongly disagreed, 5.6% agreed and none was undecided. The findings were in agreement with GoK (2012; Nyerere, 2009) that revealed curriculum implementation with obsolete training equipment leads to poor training quality and acquisition of skills leading to mismatch of skills among graduates. On availability and suitability of workshops and classrooms, 61.1% strongly disagreed while 16.7% agreed. Further, the findings revealed that on VTCs provision of relevant instructional materials, 38.9% of principals strongly disagreed while at the same time 16.7% strongly agreed that VTCs have adequate instructional materials. This left 27.8% of principals undecided. On VTCs availability of relevant source of power, majority of principals 33.3% strongly agreed against 11.1% who disagreed. In terms of adequacy and suitability of furniture, majority of principals 33.3% strongly disagreed that suitable furniture stands as a challenge in VTCs. A number of principals 44.4% also strongly disagreed that tools and equipment were technologically up to date compared to those in industries while 5.6% strongly agreed.

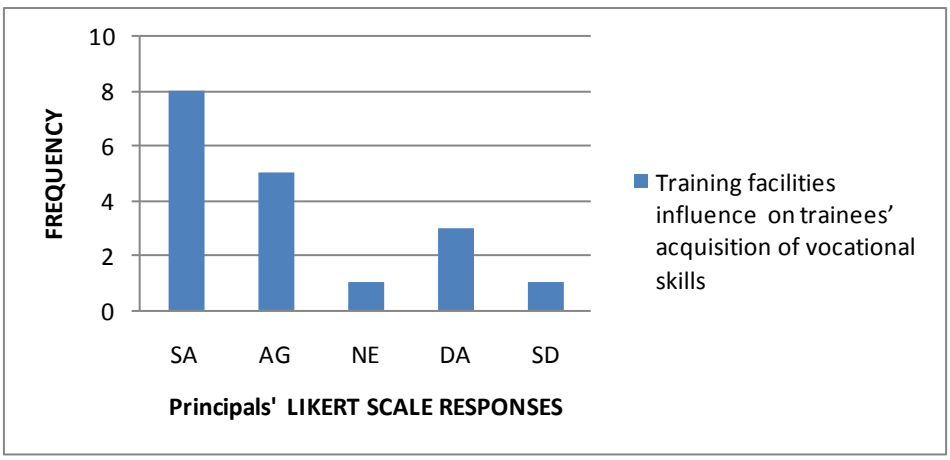

Figure 1. Shows the Responses of Principals on the Influence of Training Facilities on Acquisition of Vocational Skills by Trainees in Public Vocational Training Centers in Kakamega County

The fourth objective of the study was: To examine the influence of instructional strategies on

acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

The fourth objective of the study sought to find out the influence of instructional strategies on acquisition of vocational skills. To analyze the influence of instructional strategies on acquisition of vocational skills, Likert Scale was used to collect data that was applied in evaluating VTCs' use of the demonstration, project work, work based learning, problem solving, lecture method, field trips and simulation.

The findings of the study indicated that, majority of principals 50.0% were in agreement that demonstration method was very common in their VTC 16.7% disagreed and 5.6% were neutral. However, majority of principals 33.3% strongly disagreed that project work is used in their VTC, 11.1% strongly agreed and 11.1% were neutral. On trainees' exposure to work-based learning, most of principals 50.0% agreed while 5.6% disagreed and 11.1% were neutral. Also, most principals 16.7%% strongly disagreed that problem-based learning was commonly used in their VTCs while 5.6% strongly agreed and 22.2% were neutral. The findings also revealed that, majority of principals 33.3% were for the opinion that lecture method was always used in their VTC While none strongly disagreed and 22.2% were undecided. This Concurs with Simiyu (2009) findings that depicted that TVET teachers were more comfortable teaching theory than practical.

Majority of principals 44.4% strongly agreed they embrace field trips for their trainees while 0.0% had strongly disagreed and 11.1% were neutral. Contrary majority of principals 22.2% strongly disagreed that simulation was always used in their VTCs while 11.1% strongly agreed. Lastly majority of principals 55.6% strongly agreed that instructional strategies influence trainees' acquisition of vocational skills in VTC, while 5.6% strongly disagreed and none was undecided.

The findings of the study indicated that, majority of Instructors 47.6% were in agreement that demonstration method is very common in trade areas in their VTC, 4.8% disagreed and 10.5% were neutral. In addition majority of Instructors 38.1% disagreed that project work is used in trade areas in their VTC, 6.7% agreed and 13.3% were neutral. On trainees' exposure to work-based learning, most of Instructors 31.4% strongly agreed while 17.4% strongly disagreed. However, most Instructors 33.1% strongly disagreed that problem-based learning is commonly used in their VTCs while 5.8%strongly agreed and 24.8% were neutral. The findings also revealed that, majority of Instructors 35.2% agreed that lecture method is always used in their VTC While 16.2% disagreed and 17.1% were undecided. Moreover, majority of Instructors 41.0% agreed that trainees were exposed to field trips while 13.3% disagreed and 19.5% was neutral. Contrary majority of principals 21.9% strongly disagreed that simulation was always used in their VTCs while 6.7% strongly agreed and 37.14% were neutral. Lastly majority of Instructors 52.4% strongly agreed that instructional strategies influence trainees' acquisition of vocational skills in VTC, while 2.9% strongly disagreed and 4.8% were neutral.

Trainees' responses on influence of VTCs' instructional Strategies on Acquisition of Vocational

Skills.

The findings of the study revealed that majority of trainees 41.9% strongly agreed that demonstration method is very common in their trade areas while 7.5% disagreed and 9.7% were neutral. In addition, majority of trainees 24.7% disagreed that project work method is used in their trade areas compared to 21.5 who agreed. However, most of trainees 46.2% agreed that they are exposed to work based learning while 5.4% agreed and 7.5% were undecided. On use of problem-based learning frequently, majority of trainees 46.2% strongly disagreed, 17.2% strongly agreed and 23.7% were undecided.

The findings also revealed that majority of trainees 51.8% agreed that lecture method was always used in their trade areas while 8.4% disagreed and 4.8% were neutral. Moreover majority of trainees 35.5% strongly agreed that learners in their VTC were given opportunity for field trips, while 6.5% strongly disagreed and 11.8% were undecided. On frequent use of simulation method, majority of trainees 43.0% disagreed while 12.9% agreed and 12.9% were neutral. Lastly majority of trainees 49.5% strongly agreed that instructional strategies influencing trainees' acquisition of vocational skills in a VTC, while1.1% strongly disagreed.

3. Discussion

Kenya is facing challenges of unemployment and vocational training centers can be part of solution to this problem, since they equip students with vocational skills which are readily consumable by the community. Establishing institutional factors influencing acquisition of vocational skills by trainees in vocational training centers is paramount since it enables education stakeholders to address the issues and impart high quality skills in VTC's trainees since low quality training has several negative consequences on both individual and society in terms of economic, social and psychological dimensions.

Though other previous researchers have investigated on general challenges in vocational institutions, this study provides information on institutional factors that influences trainees' acquisition of vocational skills in public vocational training centers in Kakamega County in terms of instructors' capacity, financial resources, training facilities and teaching strategies. Findings of the study have significant implications for the future of vocational training centers in Kakamega County and in the country as a whole. The findings would also be of assistance to the Kakamega County stakeholders to unravel useful insights in the use of scarce resources for the promotion of skills for sustainable development, which would enable the county to achieve Kenya's vision 2030.

In addition, it enlightens the Board of Management (B.O.M) on the existing resources in their VTCs and how they impact on quality of training of the trainees. Besides, the study will enable the Kakamega County government to have a better understanding of factors affecting trainees' quality training in vocational training centers and formulate new vocational training centres policies as well as improving on the already existing policies, towards better provision of quality training to intervene such as VTCs training staff policy, funding policy as well as training facilities policy.

The recommendation of the study also provides useful knowledge to vocational training centres administrators, instructors, students and other educational stakeholders on ways of ensuring high quality training in VTCs. The study findings are also useful to scholars as a reference material for data needed in promotion of quality Training in Vocational Education and Training. Lastly and not least, the findings are useful to the general growth in literature on issues related to acquisition of vocational skills.

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