

www.ijramr.com



International Journal of Recent Advances in Multidisciplinary Research Vol. 05, Issue 01, pp.3492-3500, January, 2018

RESEARCH ARTICLE

VOCATIONAL EDUCATION AT THE CROSSROADS: INCULCATING SKILLS COMPETENCIES INTO TRAINEES

*Dr. Ibuathu Charles Njati

Department of Education Science, School of Education, Meru University of Science & Technology

ARTICLE INFO

Article History: Received 19th October, 2017 Received in revised form 05th November, 2017 Accepted 27th December, 2017 Published online 30th January, 2018

Keywords:

Planning strategies, competency based training, Skills acquisition and Workplace attachment.

ABSTRACT

There has been heighted demand for relevant skills training and information on how labour markets operate, especially in the context of addressing unemployment challenges in Africa, and Kenya in particular. This has faced various policy implementation difficulties at the local level by governments. The study addressed the expected outcomes which were to: determine the planning strategies employed during training in vocational skills, training requirements for competency based skills acquisition among trainees at vocational training centres and assess ways trainees are exposed to new scientific and technological skills during workplace attachment. The review of literature showed that education reforms can be effective if countries have capacities to make them operational, with trained staff, effective organizational processes, functioning institutions and the existence of tools and resources to plan, implement and manage effective and custom-made education policies and plans. The improvement of existing vocational skills training in the context of sustainable development goal 4;To Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all is the way to go. The study adopted descriptive study design. 6 Vocational training centres in Meru and Embu Counties with 90 second years drawn from trades of carpentry, masonry and tailoring using random stratified sampling technique were picked. The 18 instructors instructing these trades, 12 members of board of management and local vocational education officers purposively participated in the study. Questionnaires, interview schedules and document analysis were used to collect data. Data analysis was done using percentages, ANOVA and descriptions. This formed the basis of, discussions and recommendations. The findings showed that 70% of the instructors interviewed said institutions were struggling to implement their strategic plans due to financial constraints. Majority of trainees rated the strategic plans feasibility above 50%. Availability of improved and modern training materials (78%) is a fundamental requirement during rollout of training in a trade. 70 % of instructors and 73% of masonry trainees were aware about concept of competency based skills training. Based on ANOVA computations at p=0.000<0.05about the mean rating of each of the three sub - groups (x=2.07 for lecturers, x =2.02 for students, and x=1.93 for workplace supervisors) regarding the statement 50% weighting of students' reports is appropriate' was below the theoretical mean indicating disagreement on the part of respondents. Respondents perceived as inappropriate the 50% weighting of the workplace experiences reports submitted by trainee. The means of the three groups were slightly above the theoretical mean (x=2.5) about the statement 'assessment of trainees by instructors during workplace attachment is not necessary'. Thus, all the three categories of respondents rejected the statement. The study concluded that vocational training centres were struggling to implement their strategic plans mostly due to financial constraints. The study recommends that the governments of third world countries should enforce competency based training among vocational training centres as matter of good training policy.

INTRODUCTION

Bonnie Urciuoli hypothesized "skills" with occupational demands of neo-liberal economies, workers are required to "own their skills" and successfully market them to employers. Training to rewarding for personal habits or traits such as dependability and conscientiousness can yield significant return on investment for an organization (UNESCO, 2016). Therefore, the purpose of training an individual is to try to

enhance his/ her "existing skills", to try to transform the individuals into better performing person and above all preparing them to be "more employable" (Levy and Yadin, 2013). Thus, Education reforms, especially in vocational education, can only be effective if countries have the capacities to make them operational, with not just trained staff, but with effective organizational processes, functioning institutions and the existence of tools, equipment and resources to plan, implement and manage effectively and customer-made education policies and plans. According to the United Nations (2012), Africa's population in 2011was approximately at 1.05 billion and is expected to double by 2050. In 2011, youth, aged

^{*}Corresponding author: Dr. Ibuathu Charles Njati,

Department of Education Science, School of Education, Meru University of Science & Technology, Meru, Kenya.

between 15 and 24 years of constituted 21 percent of the more than 1 billion people in Africa, whereas another 42 percent of this population was less than 15 years old. The challenges for youth that confront Africa's economic development are enormous, numerous and varied. They include employment, health and political participation among others. These issues differ among youth groups and within countries via gender, education level, ethnicity and health status in different countries and across regions. On the contrary, the size, dynamism, enthusiasm, energy and innovation of youth are assets that could be harnessed for Africa's development with appropriate policies that address adequately issues facing them. Thus, all economic factors being constant, an overall increase in the youth population will depress the real wage in an economy by increasing the labour supply, which in turn will increase employment rates. This may depend on the degree to which youth labour is substitutable for existing or otherwise adult labour / capital. However, all things being held equal, it is not clear whether an increased youth labour supply could lead to increases in aggregate employment and output because the contribution of youth to economic growth in Africa depends on whether or not they are in gainful employment. Moreover, labor market data in Africa are seriously unreliable because most countries do not collect such data on a consistent basis. Even when these data are collected, they are available for only the formal sector (Gyimah and Kimenyi, 2013).

The repercussions of not developing and harnessing youth's potential could be lead to significant economic losses, armed conflict, political, social upheavals and instability. Youth are more likely to be frustrated because of lack of employment opportunities, low educational attainment, and little participation in decision-making and low social mobility. These could melt down to massive instabilities that could limit the economic growth of Africa's countries (Gyimah and Kimenyi 2013). Gyimah and Kimenyi (2013) observe that although youth constitute about 37 percent of Africa's labour force, they account for about 60 percent of total unemployment in Africa. The labour force participation rate among youth is higher in sub-Saharan Africa than in North Africa. However, little empirical work has been done on the causal linkages between youth unemployment rates and labour force participation rates in Africa. More so, a simple correlation analysis suggests a strong negative relationship between the two in Africa. Despite the higher educational attainment of youth relative to the population as a whole, the youth unemployment rate in Africa tends to be higher than for the population as a whole compared with the rest of the world. This report continues to observe that youth unemployment rates in Africa average more than 10 percent and is expected to remain above this percent up to 2015. Thus, African youth unemployment rates are high compared with the world as a whole. For example, in 2011 the 12.5 percent youth unemployment rate in Africa was about four times the rate in Southeast Asia. The high youth unemployment rates in Africa are not limited to those with less education. For example, in Tunisia, which has one of the highest-quality tertiary education systems in Africa, only about 30 percent of students graduating from university were able to find a job in the first year after graduation. Similarly, in Ghana and Nigeria a large proportion of university graduates could find jobs only in the informal sector in urban areas (UN, 2011b). On the other hand, there are large intraregional variations in youth unemployment rates in sub-Saharan Africa and North Africa. For example, the youth unemployment rate was below 5 percent in Malawi, above 20

percent in Ghana and Zimbabwe, above 30 percent in Botswana and Mauritius, and above 60 percent in South Africa in 2010. In North Africa, youth unemployment rates in Egypt, Tunisia and Algeria were all above 30 percent. What could explain the high rates of youth unemployment rates in Africa? Empirically, several factors have been identified. First, slow economic growth has not generated enough jobs. Although there has been positive significant economic growth rate in Africa in the last decade, the growth rate has been generally low in comparison to the rest of the world. Secondly, the high youth unemployment rate may be due to skills mismatch. Observable, the educational system produces skills that are not demanded by employers. In a sense, the educational system is based on irrelevant curricula and inappropriate pedagogy and lack of skills competencies among trainees (Gyimah and kimenyi, 2013; and UN, 2011b).

Basic education is important for empowering individuals and transforming societies and also an indispensable tool for poverty reduction strategies. Provision of basic education should be devised, keeping in view a country's requirements and demands by industry and economy, and development priorities. Emphasis on providing necessary skills as an essential component of basic education such as skills required by the country and the community where an individual lives can wield enormous influence and yield results for empowering the youth and adults who remain deprived of basic education (Sharma, 2013). Thus, there is huge empirical gap on planning for skills training based on job competencies as opposed to raw training. This could address the inconsistencies in vocational training institutions and the labour market provisions.

The problem statement

Based on these empirical observations, it is clear, 70 percent of youths graduating from training institutions could not get a job during the first year after graduating. Many graduates including university graduates ended up securing jobs in the informal sector (UN, 2011b and UNESCO, 2016). Therefore, it was imperative to investigate the existence of planning for youth training in vocational skills among service providing institutions, determine the training requirements for job skills acquisition among the youth trainees' and suggest possible policy mechanisms to provide competency based vocational skills training.

Objectives

- 1. To determine the planning strategies employed during training in vocational skills at vocational training centres.
- 2. To explore the training requirements for competency based skills acquisition among trainees at vocational training centres.
- 3. To assess ways trainees are exposed to new scientific and technological skills during workplace attachment.

Research Questions

- 1. What are the planning strategiesemployed during training in vocational skills at vocational training centres?
- 2. What are the training requirements for competency based skills acquisition among the trainees at vocational training centres?

3. In what ways are trainees exposed to new scientific and technological skills during workplace attachment?

Literature review

Empirical studies show that about 75 percent of Kenya's population is below 30 years of age, which makes it a youthful country. Like youth in almost all African countries, the challenges facing youth in Kenya include unemployment, limited access to high-quality education (especially higher education), health care, training and recreation, and peer pressure. The unemployed also feel marginalized and frustrated, conditions that have been exacerbated by the recent violence, and they are vulnerable to exploitation by political and ethnic leaders. These studies suggested that Kenyan youth are aware of their predicament and regard unemployment to be their most important challenge, followed by poverty among others. The government of Kenya has made efforts to address the problems facing the unemployed, but it is believed those efforts have been inadequate and ineffective (Gyimah and Kimenyi, 2013).

While vocational training has been without regulations and offered by any providers setting their own standards, this was quashed by The Technical and Vocational Education and Training Act, 2013 which spelt our among other vocational training requirements such as:-'Any person or institution intending to offer training in Kenva shall apply to the Board in the form prescribed by the Board from time to time'. Additionally, 'Any person who intends to become a trainer in an institution shall apply for licensing and registration by the Board in accordance with the provisions of this Act' ROK (2013). These regulations are thought to bring sanity tothis type of education by licensing training institutions and training instructors. This would enforce the element of skills competency based training. However, the implementation of the policy would face challenges of accrediting training institutions with bogus facilities, equipment and tools.

Education reforms can only be effective if countries have the capacities to make them operational, with not just trained staff, but with effective organizational processes, functioning institutions and the existence of tools and resources to plan, implement and manage effective and custom-made education policies and plans. Thus, the improvement of existing vocational skills training in the context of sustainable development goal 4; namely to *Ensure inclusive and equitable* quality education and promote lifelong learning opportunities for all is the way to go(UNESCO, 2016). One of the particular domains which call for special attention is recognition of qualifications in informal sector, rural economy and linking skills development to literacy. For example, in India, the traditional diplomas for vocational education given in the Industrial Training Institutes (ITI's) have in recent times been challenged for the lack of direct correlation to contemporary needs of industry and economy. Competence-based training, not mere theory-based certification is necessary which lead to employability and livelihood generation (EU, 2016). Such an approach is a response to India's requirements in skills, with a huge national skill development programme to skill 500 million by 2022. The creation of India's National Skill Development Corporation (NSDC) which has both government and industry partnership is a novel institutional approach set up for attaining that objective. We must recognize the need of a doable, quantifiable and sustainable plan to stay tuned with

future needs to develop learners who are able to adapt to present day job requirements. Various factors that need to be addressed in bridging the skill gap through sustained interactions with corporate houses and industry across a country must be identified. It is crucial to bear in mind that education is a social responsibility and should be shared by corporate sector, as well as by other key players in education. While private sector should be harnessed for imparting education, care should be taken that their programmes contribute to the marginalized sections of society and are not solely profit driven, but reflect corporate social responsibility (Ibid). One set of responses has been provided in a recent ILO policy dialogue forum on sectoraltraining strategies. Examining global drivers of long-term change that bear on the provision of trainingand skills, a strategic framework that creates bridges between training and the world of work, and theessential building blocks of a robust training strategy, the strategy emphasizes the cornerstones of policies to expand skills and broaden access to skill formation through:

- Quality education as a foundation for future training:
- A close matching of skill supply to the needs of enterprises and labour markets;
- Enabling workers and enterprises to adjust to changes in technology and markets; and
- Anticipating and preparing for the skills of the future.

The strategy insists that, when applied successfully, this approach nurtures a virtuous circle inwhich more and better education and training fuels innovation, investment, economic diversificationand competitiveness, as well as social and occupational mobility hence the creation of more butalso better productive and rewarding jobs (ILO, 2015).

According to EU 2016, living and working in a technologically advanced and globalised economy requires people to be equipped with a high level of competency. Professional skills are critical for individuals to be able to assert themselves in the competitive and rapidly changing labour market of today. From a system perspective, the development of higher skills is a necessary component to increase levels of competitiveness, innovation, job creation, GDP growth and social cohesion. Yet underperformance in basic skills, notably numeracy and literacy, is still a widespread phenomenon in all age groups in Europe. Skills enhancement and transparency feature prominently in the European Commission's work programme and in the New Skills Agenda for Europe, launched in June 2016. The New Skills Agenda sees skills as an important precondition for the employability of workers and the prosperity of societies. It addresses this by improving the quality and relevance of skills formation, for instance by looking at ways to support low-skilled adults acquire missing skills and qualifications, making skills and qualifications more visible and comparable, improving skills intelligence and information for better career choices, and by investing in the transferability and forecasting of skills. It also goes beyond the notion of basic skills and labour market relevant skills by driving a reflection on the broader set of transversal skills needed for lifelong learning (EU, 2016). The New Skills Agenda for Europe underlines the importance of developing skills for employment, personal development, social inclusion and active citizenship. Additionally, the EU funded Erasmus programme supports innovation in school education with funding for staff mobility, partnerships and policy experimentation. Current literature indicates that school education is moving from a

culture of individualistic knowledge acquisition towards collaborative knowledge creation. One innovative practice is the increased use of digital tools for learning, tackling early leaving from education and training, and promoting inclusive education. More broadly, innovative practices involve putting greater emphasis on evidence-based decision making to maximise the effectiveness of public investment in education. It is about developing new approaches to school organisation, teaching and learning (EU Parliament report, 2015).

As part of the Skills Agenda package, the European Commission proposed to MemberStates establishing a Skills Guarantee to help respond to skills gaps, inequality and emerging labour market needs due to improved levels of skills. Through this initiative, policy makers would design and implement policies specifically made to improve the skills of low-qualified adults, by offering them access to skills pathways. An initial phase should include assessment, validation and certification of existing skills. Improved, training provision should be tailored to their individual learning needs which cover literacy, numeracy or digital skills. Training provision should take into account the varied needs for information and support among low-qualified persons; and possibly lead to acquiring a qualification recognised on the labour market and in the education sector. It was perceived that the combined action of this initiative with the recommendations on early school learning and the Youth Guarantee would ensure that the entire eligible population that has low levels of basic skills would receive the opportunity to up skill EU, (2016).

MATERIALS AND METHODS

This study employed descriptive survey research design. This is a research design in which there are intact groups or phenomenon understudy as proposed by (Kerlinger, 1976 & Saunders, 2009). In the study, the place of vocational training centres was studied in light of training environment that constituted the day today training practices conducted by training providers in readiness to equipping trainees with relevant knowledge skills and attitudes in facing the vocational job market. The study population constituted carpentry (60) and masonry (90) traineesin second year of study in 5 randomly sampled vocational centres in Isiolo and Meru Counties. The study worked with a sample of 60 respondents randomly selected from the two tradesin proportion measures (carpentry-40; masonry-36) in vocational training centres located in both rural and urban centres. Further, the study purposively sampled 10 instructors and randomly sampled 5 workplaces and the in charge where trainees undertook attachments practices. The study employed the use of survey questionnaires on trainees and persons manning workplaces where trainees were attached. Interview schedules were conducted among the sampled instructors, and owners of workplaces where trainees were attached. The data was analysed using percentages, ratios and ANNOVA.

RESULTS AND DISCUSSION

Planning Strategies Employed during Training at Vocational Training Centres

The study addressed the question on the planning strategies employed during training in vocational skills at vocational training centres. The field experiences revealed that among the studiedfive vocational centres, two exercised different but effective planning strategies in ensuring trainees acquired the right skills competencies. Majority of the vocational institutions studied perceived results at the strategic planning outcome levels as the product of the collective action of departments within a vocational training centre and key stake holders who included parents, county governments, instructors, trainees, institutional administrators, board of management and opinion leaders within the local community. First on the planning strategy, institutions developed strategic plans covering five year period by indicating the relevant inputs and expected outputs in each trade. Secondly, output indicators captured interventions to improve tools and capacities for the provision of qualityvocational education. This included instructor inservice training programmes, learning materials, strengthening curricula in light of modern market skills requirements. institutional leadership and pedagogic supervision, and the efficiency of training centres and their staff.

Table 1. Vocational training skills strategic plans to improve the quality and performance

Trade (Carpentry/masor	nry) Stakeholders inputs	Output	Implementation period	
Output 1. Expected inputs and outs				
Financing S	Solicit for funds through harambee	Build modern workshops	2014-2018	
S	Seeking for sponsors/donors locally	Build modern workshops		
S	Sponsorship by county government	Build modern workshops		
i	nitiating income generating projects per	Gradually equip all workshops	with modern	
(lepartment	training tools and equipment		
Output 2. Interventions	to improve training outputs			
Enrolment	Increase the number of trainees per trade by 5	Increased number of desks/tables	s proportionately 2014-2018	
	per year	~		
Training recourses	Improved delivery of training materials both	Good accessibility of tra	ining materials	
	text manuals and consumables	enhancing skills acquisition by the	rainees	
Capacity building	Ensuring each instructor attends inservice	Enhanced pedagogic skills deliv	ery at classroom	
	training once in three years		4.1	
	Recruit an additional instructor per trade	Ennanced pedagogic skills deliv	ery at classroom	
Markat basalina	Enhanced market of the products and corriges	Improved appellment complex	delivery and	
	offered by an institution	institutional growth	e delivery and	
Bartiainating in trada	Exhibiting marchandise made by institution in	Pring some funds, trephies: pen	ulariza the works 2015 2018	
fares	local and regional trade fares	and name of a vocational training	a centre	
Tares	local and regional trade fares	and name of a vocational training	g centre.	

Finally, the third level planning strategy outlined indicators relating to the delivery of innovative skills development programmes targeting the vulnerable unemployed population groups and vocations considered most in need. These included targeting women and men to train in such occupations like hair dressing, painting, pottery and curving among others. However, practically only two out of five vocational centres had elaborate strategic plans for their institutions; while the rest had sketch documents of the same or none. Table 1 shows a strategic plan developed by a sampled vocational institution. Although there were strategic plans, most of the instructors interviewed (70%) observed that institutions were struggling to implement them due to financial constraints. But they noted that for any institution to achieve their dreams, they must abide by their strategic plans. Therefore drawing simple and achievable strategic plans was recommended as opposed to ambitious and expensive plans. These facts were supported by MasterCard Foundation, (2017) in that Planning competency based training from the outset by creating flexible, simple and adaptable training models that allow working with governments (both national and county); continuous monitoring and evaluation through learning partners; and disseminating of evidence at appropriate time to key stakeholders is of essence in achieving the targets. The question on whether the trainees were aware about their institutions' strategic plans or not, how they rated their feasibility and the indicators they attached to them attracted the following responses:

 Table 2. Trainees' awareness of existence of institutional strategic plans

Trainees	Gender	Awareness (%)	Ratings %	Indicators
Carpentry	Boys (18)	64	56	New workshop foundation has started
	Girls (6)	53	55	Building blocks delivered
Masonry	Boys (26)	65	60	Construction materials gathered
	Girls (10)	61	48	Harambee was conducted and raised funds
N = 60				

Thus, slightly more than half of trainees in sampled trades were aware of existence of their institutions strategic plan and could provide one or two indicators for its implementation. Besides, majority of trainees rated the strategic plans feasibility above 50%. This indicates the trainees were involved as key stake holders during development of the institutional plans.

Moreover, both trainees and instructors provided opinions on the innovative approaches accessible to vocational centres in rolling out training within the trades as follows:

It is quite clear that availability of innovated and modern training materials (78%) is a fundamental requirement during rollout of training in a trade. This is because modern training manuals (electronic) and consumable materials are necessities for competency skills training. In this regard, MasterCard Foundation, (2017) concurs that without innovative forms of financing, increased government outlays, and further involvement by outside donors and the private sector, the vocational training models and reformed curricula for competency based skills cannot meet their full potential. However, offering community services like cleaning hospital

compounds and market streets attracted 40% as necessity for rollout of a trade. This could be supported by the fact that community outreach services do not relate directly to a trade rollout but is important in marketing the institution, creating and strengthening neighbourhood-institution linkages as part of corporate social responsibility.

Competency based Training

In responding to what is competency based training, the respondents had the following opinions:

Table 3. Respondents	views about	competency	based	skills
	training			

Respondents	Awareness (%)	Views	Present practices within vocational training centre
Carpentry	67	Increasing chances for greater employment and income opportunities for all trainees.	Trainees engaged into more practice hours than theory lessons
Masonry	73	Engaging in the right training using appropriate tools and delivering in the work place.	Procuring new tools and equipment for training
Instructors	70	Focusing more on skills acquisition by trainees and delivering the right skill at a workplace as required by the standard of work.	Engaging learners into acquiring skills at every stage as required by standards of a given skill.
N = 70			

The respondents were aware of what competency based training is about. However, they were limited in explaining the key requirements of such training within their institutions. 70% of instructors and 73% of masonry trainees were aware about concept of competency based skills training. But this was not reflected in what masonry trainees observed went on in their institutions. However, the trainers were familiar with the requirements of competency based skills training but were limited by inadequate tools, equipment and inservice training among others.

In contrast ILO, (2015) documents four essential characteristics of competency based training systems as follows:

- i. Criteria to be used in assessing achievement and the conditions under which achievement will be assessed are explicitly stated and made public in advance.
- ii. The instructional programme provides for the individual development and evaluation of each of the competencies specified.
- iii. Participants progress through the instructional programme at their own rate by demonstrating the attainment of the specified competencies.
- iv. In vocational education and training, people are considered to be competent when they are able to apply their knowledge, skills and attitudes to successfully complete work activities to the standards of performance expected in the workplace.

Thus, Competency based skill training (CBST) is taught because this is what the students need most in order to access

decent work in the work place, both immediately and later in their work life. This training must be both relevant to the labour market and that the resulting job is actually a decent one. Both aspects are at the core of competency based skill training. (CBST) aims at acquiring pre-specified levels of competence in a given occupation. This is done through teaching trainees a series of designated work activities performed to a specific standard under specific conditions (competencies). Once a trainee has successfully demonstrated mastery of a specific competency, one may advance to the next level of skill competency. with the theoretical mean rating of 2.5 on a five level Likert scale rating to determine whether respondents agreed with the issues or not (assuming normal distribution of responses). Among the 10 items relating to organizational factors, four related to assessment of trainees (items 1to 4), four related to departmental involvement in the trainees workplace attachment (items 5 to 8) and two item related to duration (item 9-10) in table 1 respectively at (p=0.000<0.05), df=2. The analysis shows that three out of the four items relating to assessment, the mean ratings of all the three subgroups far exceeded the theoretical mean (Table 1).

Table 4. Stakeholder rating of the supervised workplace attachment program in vocational education and training from the sample	ed
vocational centres (N=75)	

Instructors Ratings (n1=10)		Trainees Ratir (n2=60)	Trainees Ratings (n2=60)		Workplace Supervisor Ratings (n3=5)	
Mean	SD	Mean	SD	Mean	SD	
3.39	0.598	3.50	0.684	3.47	.781	0.003
3.25	0.585	3.55	0.518	3.04	0.473	6.448
2.07	0.469	2.02	0.421	11.93	0.563	0.410
2.98	0.419	3.28=3.30	0.471	2.73=2.71	0.576	10.720
3.51	0.750	3.42	0.649	3.51	0.784	0.083
3.14	0.858	3.24	0.752	3.17	0.715	0.029
2.59	0.699	2.68	0.469	2.67	0.465	0.077
2.51	0.613	2.57	0.513	2.56	0.581	2.002
1.29	0.211	1.51	0.251	1.39	0.241	0.736
2.32	0.461	3.43	0.580	3.37	0.642	1.939
	Instructors Rat (n1=10) Mean 3.39 3.25 2.07 2.98 3.51 3.14 2.59 2.51 1.29 2.32	Instructors Ratings (n1=10) Mean SD 3.39 0.598 3.25 0.585 2.07 0.469 2.98 0.419 3.51 0.750 3.14 0.858 2.59 0.699 2.51 0.613 1.29 0.211 2.32 0.461	Instructors Ratings (n1=10)Trainees Ratings (n2=60)MeanSDMean3.390.5983.503.250.5853.552.070.4692.022.980.4193.28=3.303.510.7503.423.140.8583.242.590.6992.682.510.6132.571.290.2111.512.320.4613.43	Trainees Ratings (n2=60)MeanSDMeanSD3.390.5983.500.6843.250.5853.550.5182.070.4692.020.4212.980.4193.28=3.300.4713.510.7503.420.6493.140.8583.240.7522.590.6992.680.4692.510.6132.570.5131.290.2111.510.2512.320.4613.430.580	Instructors Ratings (n1=10)Trainees Ratings (n2=60)Workplace S Ratings (n3)MeanSDMeanSDMean3.390.5983.500.6843.473.250.5853.550.5183.042.070.4692.020.42111.932.980.4193.28=3.300.4712.73=2.713.510.7503.420.6493.513.140.8583.240.7523.172.590.6132.570.5132.561.290.2111.510.2511.392.320.4613.430.5803.37	Instructors Ratings (n1=10)Trainces Ratings (n2=60)Workplace Supervisor Ratings (n3=5)MeanSDMeanSDMeanSD3.390.5983.500.6843.47.7813.250.5853.550.5183.040.4732.070.4692.020.42111.930.5632.980.4193.28=3.300.4712.73=2.710.5763.510.7503.420.6493.510.7843.140.8583.240.7523.170.7152.590.6132.570.5132.560.5811.290.2111.510.2511.390.2412.320.4613.430.5803.370.642

Statistically significant (p=0.000 < 0.05, df=2 for computed F > F.05 (2, 72)=3.07); Not statistically significant (p=0.05, df=2 for computed F value < F.05 (2, 72)=3.07)





Scientific and Technological Skills Exhibited by Trainees at Workplaces

The third study question sought opinions of respondents on ways trainees are exposed to new scientific and technological skills during workplace attachment. The mean rating of each of the responses by three categories of respondents for each item were worked out. The computed means were then compared Thus, the respondents agreed with three items relating to assessment including appropriateness of the competencies on which students are assessed during attachment. The mean rating of each of the three sub - groups from table 4 regarding the statement 50% weighting of students' reports is appropriate' was below the theoretical mean indicating disagreement on the part of respondents (x = 2.07 for lecturers, x = 2.02 for students, and x = 1.93 for workplace supervisors).

Thus, respondents perceive as inappropriate the 50% weighting of the department's assessment of reports trainees submit regarding their workplace experiences. On the contrary, respondents agreed that the pass or fail weighting of students' workplace experiences assessed by their instructors is not significant for skills competencies.

Essentially, these findings suggest that stakeholders would like to see less emphasis being placed on students' reports and more emphasis on students' workplace experiences where trainees gained skill competencies. The essence of workplace attachment is for the acquisition of practical skills and not necessarily for students to acquire the ability to express themselves in report as expressed by (OECD, 2014). Such an observation could be particularly true for students of the vocational training programs for whom report writing may add value but more emphasis should be put into enhancing skills competencies in workshop where they will eventually be required to function. In this regard, Alison, (2017) and Harvey, (2010) emphasize that the ability to apply knowledge to different situations is a skill that is highly valued by employers. Hence the practical experience should provide an ideal environment for active learning by fulfilling the ultimate goal of developing competencies through the act of applying theoretical learning in a workplace during practical sessions. Therefore, it may be appropriate that much weighting be placed on students' workplace experiences and not on reports that could be unduly influenced by students' communicative skills as well as other peers in support of their own. It is observable that in vocational skills the measure of competency is how a trainee does a specific skill gauged on given standard as opposed to how much one could express himself or herself grammatically. Regarding other aspects of assessment, respondents agreed with the appropriateness of the competencies on which trainees are assessed in that the project a trainee does during attachment period is adds more value to skills competencies. Workplaces in charge were perceived as the right assessors to assess trainees on the attachment program. The in charge at workplace gives assignments to the students and also monitors their progress on daily basis in terms of skills acquisition on the program. In this regard, workplace in charge is in a better position to assess the trainees because they take them through the new skill cycles under their observations as observed by (Atkins, 2011). Out of the four items relating to the department's involvement in the program in table 4, two items had mean ratings of the three sub - groups exceeding the theoretical mean. The respondents' opined absence of workplace attachment officer during attachment period affects a trainee's acquisition of skills competencies, hence affecting the entire workplace program. It is appropriate for vocational skills training institution to create a position of workplace attachment officer to oversee and coordinate trainees activities while on attachment. Some trainees could avoid attending workplace attachment and report back that they did since there are no proper mechanisms of verifying workplace attendance, which attachment officer could do by visiting the trainees and keeping a records of their attachment workplaces.

Trainees, instructors and workplace in charge disagreed with the statements that the institution should source for workplace attachment for all trainees. This is because some trainees preferred sourcing for their attachment based on specific skills they needed to acquire besides other subsidiary factors like upkeep expenses, negotiating for some stipend with workshop owners and security reasons. Instructors observed that it could be too expensive and cumbersome for an institution to send officers round a county and beyond to secure attachment workplaces for trainees. However, trainees said they required the institution to inform them to seek for workplace attachment three months in advanced for purposes of scouting around in search of the places. They also sought to be issued with introductory letter from the institution. Besides, all the tree categories of respondents rejected the statement that visitations by instructors to assess trainees during attachment at workplaces are not necessary. All the means of these groups were slightly above the theoretical mean (x= 2.5). Thus, the workplace supervisors found the visits were necessary. It is worth noting that workplace supervisors supported instructors to assess trainees during attachment periods. The instructors observed that it enables them to gauge trainee strengths and weaknesses hence laying proper grounds for future training. In other instances, it provides insights on improving the criteria for admissible workplaces for their trainees based on assessment experiences. Trainees too thought visitations by their instructors was relevant because it gave them a chance to do further consultations with their instructors when they visit. Besides, it gave them moral support and emphasis that workplace attachment was equally weighted likes other courses within the program.

Two of the three sub - groups rated the item relating to the attachment of trainees at workplace is appropriate as the last item of the program well above the theoretical mean (x=3.43 for trainees, x = 3.37 for workplace in charge). In this regard, both trainees and workplace in charge opined that trainees are best placed for workplace attachment when they are through with course work. May be this could provide an opportunity for trainees to continue working and eventually be absorbed into the workshop. Most trainees observed that they found it good to continue working or imitating their businesses rather than going back for studies immediately after attachment. On the contrary, the instructors rating on the statement that attachment of trainees at workplace is appropriate as the last item of the program was below the theoretical mean (x = 2.32). Most instructors were of the view that after trainees familiarize with specific skills, they needed to be assessed practically on the competencies gained during attachment period since this is part of trainee's skills competencies evaluation per program. On the statement, 'the 8weeks period for the attachment program is adequate', all the three categories of the respondents disagreed with it. Majority respondents observed that the 8 weeks duration was short and did not offer a trainees ample time to practice with specific equipment and gain relevant skills competencies as required. The work place in charges observed that they were made to hurry up trainees through some skills in order to see them through all the required stages in a workshop. Majority of the three categories of respondents preferred trainees attend three months of workplace attachment.

Due to large disparity in the sample sizes of the three sub - groups (n1=10, n2=60, n3=5), the ANOVA computation was preceded by a test of homogeneity of variances. The results indicated that the variances of the three sub - groups for each of the ten items tested were homogeneous. Thus, all the items met the requirements that the three sub - groups were from a homogenous population. The item by item ANOVA results are presented in the last column of Table 4. From the

ten items dealing with organizational issues, only three produced statistically significant differences in the ratings of the respondents. For two out of the four items on assessment, there was uniformity in the responses of the respondents as there were no statistically significant differences in the ratings of instructors, trainees and workplace supervisors. However, for two of the items relating to assessment, the respondents markedly differed in their ratings. Though all the three sub - groups agreed that workplace supervisors are the right people to assess students on the attachment program, the pair wise comparisons showed that trainees ratings (x = 3.55) were statistically significantly higher than that of instructors (x)=3.25) and workplace supervisors (x = 3.04). Also, the ratings of instructors (x = 3.25) and trainees (x = 3.55) were higher than that of workplace supervisors (x=3.04) regarding the adequacy of the project a trainee does during attachment period adds more value to skills competencies of a program. The item - by - item ANOVA results in Table 4 also show that of the four items on the department's involvement in the program. and the two items on timing of attachment, there was uniformity in the responses of the respondents in all as there were no statistically significant differences in the ratings of instructors, trainees and workplace supervisors.

Conclusion

The study concluded that vocational training centres were struggling to implement their strategic plans mostly due to financial constraints. However, institutional strategic plans were found to be useful in propelling the institutions goals and missions in the right direction. Therefore drawing simple and achievable strategic plans is recommended as opposed to ambitious and expensive plans. However, availability of improved and modern training materials is fundamental during rollout of training in a given trade. This is because modern training manuals (electronic) and consumable materials are necessities for competency skills training. On the contrary, community outreach services do not relate directly to a trade rollout since such activities are important in marketing the institution, creating and strengthening neighbourhoodinstitution linkages as part of corporate social responsibility. Overall, the study concluded that competency based training was severely limited by inadequate tools, equipment and inservice training among others. It is critical to note that there is no shortcut to competency based training. This sort of training flows through the following four critical stages:

- i. Criteria to be used in assessing achievement and the conditions under which achievement will be assessed are explicitly stated and made public in advance.
- ii. The instructional programme provides for the individual development and evaluation of each of the competencies specified.
- iii. Participants progress through the instructional programme at their own rate by demonstrating the attainment of the specified competencies.
- iv. In vocational education and training, people are considered to be competent when they are able to apply their knowledge, skills and attitudes to successfully complete work activities to the standards of performance expected in the workplace.

The study recommends that the governments of third world countries should enforce competency based training among vocational training institutions as matter of good training policy. This is because competency based skill training is what the students need most in order to access decent work in the work places both immediately and later in their work life. The study concluded that instructors make regular visits to trainees during workplace attachment. This component enables instructors to gauge trainee strengths and weaknesses hence laying proper grounds for future training. In other instances, it provides insights on improving the criteria for admissible workplaces for their trainees based on assessment experiences. There should be less emphasis placed on students' reports and more emphasis enforced on students' workplace experiences, in terms of weighting, where trainees gain skill competencies. The essence of workplace attachment is for the acquisition of practical skills and not necessarily for students to acquire the ability to express themselves in report writing. Thus, the practical experience should provide an ideal environment for active learning by fulfilling the ultimate goal of developing trainee's competencies through the act of applying theoretical learning in a workplace during practical sessions. Finally, it is recommended that Governments that wish to embrace competency based skills, but that lack the full capacity to design or integrate these skills within the curricula for vocational training centres should allow space for experimentation, research and development. Some of this can be achieved by identifying well-designed pilot projects with strong records of positive impact on youth livelihoods that can be incorporated training centres.

REFERENCES

- Alison J. S. 2017. Enhancing Students' Confidence in Employability Skills through the Practice of "Recall, Adapt and Apply". *Higher Education Studies; Vol. 7, No.* 3; 2017; ISSN 1925-4741 E-ISSN 1925-475X. Published by Canadian Center of Science and Education.
- Atkins, M. J. 2011. Oven-ready and self-basting: Taking stock of employability skills. *Teaching in Higher Education*, 4(2), 267-280. https://doi.org/10.1080/1356251990040208
- EU Parliament report, 2015. *Innovative Schools: Teaching & Learning in the Digital Era* (http://www.europarl.europa. eu/committees/en/eventsworkshops.html?id=20150504CH E00171).
- EU, 2016. *Education and Training Monitor, 2016*. European Union. Retrieved from: ec.europa.eu/education/monitor.
- European Commission 2016. A new skills agenda for Europe. Working together to strengthen humancapital, employability and competitiveness COM (2016)381/2.
- Gyimah, B. K. and Kimenyi, M. S. 2013. Youth Policy and the future of African development. Washington, DC: The Brookings Institution.
- Harvey, L. 2010. Defining and Measuring Employability. Quality in Higher Education, 7, 97-109. https://doi.org/10. 1080/13538320120059990
- ILO, 2015. A skilled workforce for strong, sustainable and balanced growth: Proposals to G20 leaders for a training strategy. ILO, Geneva.
- ILO, 2015. Employment Policy Department EMPLOYMENT Working Paper No. 177. Vocational teachers and trainers in a changing world: the imperative of high-quality teacher training systems. Geneva, International Labour Organization.
- Kerlinger, L. 1976. *Methodology of Educational Research (2nd Ed)*. New Delhi: Vikas Publishing House PVT Ltd.

- Levy, I. and Yadin, A. 2013. Soft skills: An Important Key of Employability- *International Journal of e Education*, Vol. 3. No. 5, Oct 2013.
- MasterCard Foundation, 2017. Skills at Scale: Transferable Skills in Secondary and Vocational Education in Africa March 2017. Lagos Nigeria, Milena Novy-Marx. Retrieved from: www.mastercardfdn.org
- OECD 2014. Skills Beyond School: Synthesis Report, OECD Reviews of Vocational Education and Training, OECD Publishing.
- ROK 2013. The Technical and Vocational Education and Training Act, 2013. Nairobi: Government Printer.

- Saunders, M., Lewia, P. and Thornbill, A. 2009. *Research methods for business students*. London: Prentice Hall
- Sharma, S. 2013. *Brazil: Technical and Vocational Education and Training and Skill Development - Exemplary Policy Approaches and Practices Examples*.Odisha, (India): Centurion University of Technology and Management.
- UN 2012. Population Facts, No. 2012/1. Report of Population Division, Department of Economic and Social Affairs. New York: United Nations.
- UNESCO, 2016. The CapED Programme; *Annual* Report2016, UNESCO, Paris.
