



Effect of Competency in Technical Skills Acquired on Labour Market Requirements in TVET Institutions in Uasin Gishu County, Kenya

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ABSTRACT

The problem of unemployment among the youth is a huge concern as majority of them face significant difficulties engaging in productive employment, mainly due to a mismatch of the competencies they possess to those required by the labour market. Technical Vocational Education and Training (TVET) is one promising avenue in addressing this problem. Kenya has identified the critical role of TVET in preparing, developing and updating the skills and competences to meet the needs of the changing industrial environment. The purpose of this study was to investigate the effect of competency in technical skills acquired on labour market requirements in Technical Vocational Education and Training in Uasin Gishu County. The target population of the study was 850 respondents comprising of 10 principals, 240 instructors and 600 TVET graduates. A sample size of 90 respondents was selected comprising of 6 principals, 24 instructors and 60 TVET graduates of the respondents. Stratified purposive and simple random sampling techniques was employed. Questionnaires were used to collect data. Cronbach's alpha co-efficient was used to ensure reliability of the research instruments. Data was analyzed using Pearson product moment correlation. The study established that there was a significant positive and strong relationship between competency in technical skills acquired and labour market requirements ($r = 0.565$, $p = 0.000$). The study concluded that TVETs competency level in technical skills acquired had significant influence on labour market requirements in TVETs in Uasin Gishu County. The Government needs to invest in training the youth to specifically meet the relevant industrial standards. In addition, practice of the skills learnt among the learners should be enhanced. This exposes the youth to the market before graduation and greatly elevates their competency levels.

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Introduction

With globalization comes the integration of technological activities in all aspects of the professional realm, thus exposing the competency levels of the skills that the youth possess. In view of the globally increasing competition, the role of vocational training has been made more decisive and this makes having higher skills necessary, as nations require more productivity among workers in all sectors. During the past several decades, the mismatch between the skills imparted by the national education system in many countries and the world of work has become profoundly evident. Kaufman and Feldman (2004), argue that universities are supposed to not only produce responsible professionals who can be absorbed virtually in all spheres of human endeavors, but also to develop their intellectual capabilities by imparting high level skills. In addition, universities are looked upon to facilitate manpower training of high level so that individuals can contribute to national development, as expected of them.

A study by UNESCO (2002) shows that with the integration of modern technologies in almost every sphere of professional activities this mismatch has been aggravated, making the priority of most Governments be narrowing this gap because of the potential economic and social benefits to be derived from having a huge demographic of its population

engaged in productive livelihoods. Employers remain skeptical of the youth being capable of applying the skills they got from school to the practical challenges at work as they are deemed to lack the competencies in those skills that are relevant to the work place. They are also adamant in investing resources to train young people and would rather hire adult workers who are unemployed but have experience.

The ILO (2004) reports that youth unemployment has risen rapidly over the past decade to reach 88 million worldwide, representing 47 percent of the 186 million persons out of work worldwide in 2003. High rates of youth unemployment represent both widespread personal misfortune for individuals and a cost opportunity for critical national and economic development. In the United States, Bishop (1994), after studying information on 2594 companies, found that there was a marginal rate of return on the initial 3 months of training from the 2-year increase in employee productivity. After 100 hours of training, productivity increased between 11 percent (%) and 38 percent (%).

Bartel (2000) also found that training courses in 495 companies increased productivity by approximately 18 percent (%) over 3 years. Ballot et al. (2006) found that training increased value added per worker in France by 17.3 percent (%) and in Sweden by 7.3 percent (%).

In the United Kingdom, based on British industry data for 1983–1996, Dearden et al. (2006) discovered that a 1 percent (%) rise in work-related training increased added value per hour by roughly 0.6 percent (%) and hourly wages by approximately 0.3 percent.

King (2007) reports that surveys from studies done in several countries such as Kenya, Zambia and Ghana among others indicate high level skills being in shortage at the same time as saturation of the labor market at other levels. Franklin & Lytle (2015) states that it is approximated that out of the working age population of twenty-four million young Kenyans, one in every six youth is jobless, yet with the neighbouring states of Tanzania and Uganda it is estimated that out of twenty youth, only one is jobless. The rates are typically higher the younger the job seeker, reflecting the difficulties the youth face in making the transition to work. This pattern is common in both advanced and developing countries with the rates of unemployment gradually declining and stabilizing as young adulthood is reached around 25 years of age.

The social pillar of Vision 2030 singles out education and training as the vehicle that will drive Kenya to achieve its goal of becoming a middle-income economy, (Nyamweya 2018). Technical and Vocational education therefore become a crucial indicator of achievement of Vision 2030's goals (GoK, 2014). Technical Training Institutions need to be included in the drafting process of the education curriculum and share their insight on how Kenya can achieve this transformation in emphasizing on practical skills employment (GoK, 2010a, 2012a).

Job Selectiveness, skill imbalance and rapid growth of the labour force are some issues identified as fostering unemployment of the youth in Kenya (The Sessional Paper No. 2, 1985). Individuals have different attitude towards various kinds of employment and that is what job selectiveness can be associated with; informal jobs are met by negative attitude among individuals with formal education (GoK, 1985). Omolo (2010) explains that people perceive the informal job sector as unsteady and with absence of workers' rights. In addition to this, the government again realized that the imperfect flow of information between the labour market and the youth as well as the mismatch in skills development are among the factors contributing to unemployment in Kenya (GoK, 2008a).

The supply of labour therefore does not meet the demand, thus leading to a steadily growing pool of unemployed youth who still want to focus on the theoretical learning that has yet to bear fruit in improving the huge rate of unemployment (GoK, 2012). Research shows that annually, a small percentage of graduates get jobs even after having obtained the university degrees thus implying low demand in the labour market. Contradictory, with the manufacturing sector being the largest in Kenya currently, there is huge demand for masons, plumbers and skilled workers but because very few pursue these skilled courses, those who can work are unqualified and unprofessional due to not pursuing the technical training aggressively. This may indicate there being issues on quality of vocational training being provided as well as its relevance to fulfilling the labor market requirements, as there is seemingly poor links to education, training and the labor market. Therefore, the education curriculum failing to meet the labour market demand and thus not being consummate is the growing assumption on the root cause of youth unemployment.

In addition, vocational training in Kenya is deemed supplementary to university education, and therefore the perception of TVET in Kenya is a downgrade form of education. The rest are encouraged to seek TVET institutions after not making the cut to university admissions. This makes it clear to the Kenyan youth that vocational education is not deemed as superior as attaining university education, and this notion has been there since time immemorial, greatly creating a mindset that leaves young Kenyans desiring to "fit in" society by having degrees obtained in the universities and very little or no determination to pursue vocational training.

Although the Government of Kenya has created many initiatives in a bid to promote the Small and Medium sized enterprises (SMEs), facilitating vocational and entrepreneurship education, and creating various funds to support youth training programs and initiatives, the problem of unemployability still persists. Otuki (2017) says that it is crucial to examine how vocational training in the country can be re-loaded and enhanced to make it more appropriate in addressing youth unemployment, considering dominant activities in society and needs of learners. In addition, based on the current situation, it is necessary to develop a skills inventory linked to a labor market information system that is efficient and this will ensure that vocational training is tailored to meet the demands of the labor market. There is need for an urgent enhancement of interventions such as the Government and other stakeholders promoting the access to quality basic education. This will go a long way to equip the youth with the required competencies in technical skills for better labour market outcomes.

Human Capital Theory

Human capital theories have developed rapidly since Mincer (1958, 1962), Schultz (1960, 1961), Becker (1962) and Ben-Porath (1967), laid their foundations. Since training is regarded as an investment, it involves costs and benefits, which can be assessed by using financial criteria such as present value and the internal rate of return. Initially, Becker (1962) studied the impact on wage levels of two types of human capital operating in a perfectly competitive labor market that had no imperfections or distortions. One type of human capital can be transferred to other organizations, which encourages employees to cover the costs and to obtain all the benefits of training. The second type of human capital is regarded as specific to a company and cannot be transferred to other companies, which incentivizes employers and employees to share the costs and benefits of training.

According to Garcia (2005), as employees do not obtain considerable pay increases due to increased productivity after attending specific training sessions, they will not be motivated to finance their own training requirements. On the other hand, companies will be keen to cover these training costs, as they will obtain almost all the returns from the enhanced productivity produced by the new skills generated. Apurva Sanghi (2016) as Kenya's lead economist at the World Bank, said that aside from the Government creating a conducive business environment to stimulate private sector growth and job creation, Kenya should also inject the financial resources so as to develop its human capital and boost nationwide productivity. The nation to step up the quality of education so as to keep the engine running, is driven by innovation.

Literature review

John Nyerere (2009) examined the mapping of TVET in Kenya in order to chart out the existing stakeholders and their

interests in TVET, past experiences and good practices regarding demand and supply of TVET and identify the strong and weak elements of the TVET sector. The importance of the exercise lies in the establishment of relevancy for future partnerships' activities. The results of the mapping process will function as a guide for the further development of country and partnership proposals, which may need to be modified or updated. He found that there is need to revise technical, vocational education and training (TVET) so that it reflects the needs of industry and the labor market. Specifically, Kenya should apply the lessons of an exhaustive study on the experiences with TVET in Kenya. Kempe (2012) analytically discussed strategies for engaging the youth in Kenya through empowerment, education, and employment. He found that there are persistent risks and challenges faced by Kenyan youth and that the country's growing youth bulge will only exacerbate that state of affairs. He advocates for considerable priority to be given to the development and implementation of TVET policies that can have a major impact on engaging the youth for their own positive personal development as well as for the country as a whole.

In reference to the analysis of the supply and demand for the formally trained engineering craftsmen in Kenya, it is imperative to question the role of the state and nature of state intervention in the area of technical training in developing countries. In regards to the growth of Gross Domestic Product, almost 90% have the assumption that as countries develop, the employment of skilled people will feature more importantly in the structures of firms and other employment organizations.

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Competency in Technical skills

Wahba (2013) refers to Technical Vocational Education and Training (TVET) as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of awareness, knowledge, skills, and attitudes relating to occupations in various sectors of economic and social life. In a TVET institution, the student is educated and trained in acquiring specific job-related skills and the courses are occupational such that they are geared towards entrepreneurial possibilities or employment. In addition, since TVET courses are vocational, Technical universities may enroll some students from TVET colleges to

continue pursuing their studies at a higher level and upgrade their skills (UNESCO, 2002).

Wahba (2013) defines Competency, which falls into two categories namely technical and behavioral, as the ability of an individual to use and apply; as well as demonstrate a group of related skills so that one can successfully perform tasks and duties. This can not only be measured against well accepted standards required in employment but can also be assessed against provided evidence at the work location. A competency based TVET system combines different techniques so as to address the needs of various industry sectors, as well as ensuring competency-based training programs are developed so that the trainees are efficiently trained and finally competency-based assessments are conducted.

TVET is that part of the education system that provides courses and training programs related to employment with a view of enabling the transition from Secondary Education to work for young trainees/ students (social objective) and supply the labor market with competent apprentices (economic objective). Relevant technical skills are lacking among the youth in Kenya and therefore it is negatively influencing employability among them. Wahba (2013) stipulates that in a TVET System, the methodology or approach of Competency-based education and training improves the correspondence between education/training and workplace requirements. CBET gives certification which supports employability as workers can take advantage of their skills in a wider range of employability options. It has an adaptive approach that allows its curriculum to introduce new programs and existing modules changed so as to meet emerging technological and work requirements.

Deloitte Consulting in its report on Human Capital Trends in Kenya (2015) states that the five most challenges for the next 12-18 months in Kenya includes retention and engagement at 76%, Leadership at 59%; Learning and development at 50%, Talent acquisition and access at 50% and workforce capability at 50%. This report clearly shows that workforce capability and competence remain an important aspect that if not looked into will prove it hard for nations to deal with employability trends. This therefore brings the aspect of employers being key stakeholders in skills development as Martin et al. (2000) suggested that, in addition to graduates, further research in this area should address other stakeholders' perceptions concerning employability skills. Paulson (2001) states that despite institutions not aiding in employability skills development, corporations are willing to partner with them and aid them; in a bid to equip them with the necessary skills and professional abilities that are needed for industry success.

Youth Employability Skills

Employability, is defined as an individual's chance of a job on the internal and/or external labor market" (Forrier & Sees, 2003, p. 106) Entry level college graduates have not acquired the skills necessary for the workforce and, as such, are not prepared for the demands of industry careers (Peddle, 2000). Otuki (2016) argues that although there is a free primary school education policy and free day secondary education policy in place; majority of the graduates still remain unemployed. In addition, there is a higher education loans board which provides for the needy Kenyan students pursuing higher learning, but they still face challenges in finding productive sources of livelihood.

Shivpuri and Kim, (2004) are of the notion that imparting the right employability skills needed by the graduates is quite a challenging task for post-secondary educators who have to prepare the graduates for the necessary skills needed in industry. Higher education institutions also have a difficult task in preparing graduates for various types of employment as most graduates begin their professional careers at specialized positions. This has led to the blame game from employers to institutions of higher education insinuating they are at fault for this ill preparedness. Possibly, college faculties and higher education institutions lack full knowledge of what the lacking skills in industry are and might also not have the capacity and necessary resources required to teach the technical skills and this greatly limits them.

Harvey (2005) argues that employability is the propensity of graduates to secure a job and progress in their career. It is not just about getting a job. It is about developing attributes, techniques or experience for life. Amimo (2012) highlights that the registered young people with formal employment among Kenya's total population of nearly 47 Million are approximately 125,000 youth and majority are graduates, as recorded in the former Ministry of Youth and Sports in Kenya.

Wittekind et al., (2010) conducted a longitudinal study of determinants of perceived employability and the results showed that there are significant predictors such as education and current level of job-related skills in perception of employability. It is important to note that while both employability and job security refer to the future, they differ in that job security is concerned with retaining the current job in the future but employability is concerned with alternative jobs as well, hence showing that having job related skills can allow young people to maneuver in different jobs as opposed to being stagnant or not having the comfort of changing jobs as they may not possess the relevant skills required to move.

Franklin & Lytle (2015) emphasizes that education appears to have a strong influence on an individual's performance at the labour market and thus indicating that there may be a significant co-relation between employability of the youth and competencies in technical skills. Therefore, there should be sustained efforts to address labor market related challenges because many youths are still stuck at low levels of educational achievement. It is necessary to identify which skills are in demand in the labour market and the TTIs need to build that capacity in their students so that they supply them to the market, and this will lead to decongestion in the already saturated labour market.

In Kenya, the rising complexity in the labour market challenges graduates in this new era to greatly develop themselves so as to become employable. This environment of radical uncertainty calls for changes and sustained effort to address the labour market challenges as many youths are still stuck at low levels of educational attainment, yet education seems to influence the labour market activity of an individual. According to Amimo (2012), as a result of this high unemployment rate, urgent attention is called upon and specifically, educators need to respond to. Peddle (2000) states that entry level college graduates have not acquired the skills necessary for the workforce and, as such, are not prepared for the demands of industry careers. Employability, defined by Forrier & Sees (2003) as an individual's chance of a job on the internal and/or external labor market.

Otuki (2016) notes that data from the World Bank indicates that youth unemployment in Kenya is currently

approximated at 17.3 per cent (%), having risen from 17.1 per cent (%) in 2011 to 17.4 per cent (%) in 2014; having the highest number of jobless young people in East Africa and among the highest in the world. According to a recent report by the United Nations; Human Development Index (2017) Kenya recorded a 39.1 percent (%) unemployment rate. Those representing the highest rate of unemployment are individuals who are around 20 years old at approximately 30 per cent followed by those who are 25 years and 35 years at 25 per cent and 15 per cent respectively (United Nations Development Program, 2013).

Research Methodology

The study adopted descriptive survey research design. In addition, descriptive survey determines and reports the way things are (Gall & Borg, 2007). This was because the study sought to obtain information that described the participants' views about how training facilities influenced the Acquisition of Skills by TVET graduates. The questionnaires enabled the researcher to establish effect of the independent variable on the dependent variable.

The population of the study consisted of 10 TVETs with a total of 850 respondents; 10 principals, 600 TVET graduates and 240 instructors. The graduates and instructors were included as primary respondents, while the Principals were included as informed respondents.

Stratified random sampling was used to sample (TVETs) and simple random sampling was used on graduates and instructors whereas purposive sampling was adopted in selecting the Principals. This was done after obtaining a list of all TVETs operating within Uasin Gishu County. Mugenda and Mugenda (2003) noted that a sample of between 10 and 30 percent is adequate for a population of below 1000. Ten percent (10 %) was used to sample the graduates and instructors since the population was large (Kombo, 2006). The Principals were purposely selected since they have core responsibility on TVETs management function. A sample size of 90 respondents was selected for this study. This was considered appropriate as affirmed by (Kothari, 2002; Cooper and Schindler, 2003) who opined that the sample of at least 10% of the target population was representative.

The study was conducted with aid of primary data from graduates, principals and instructors in Uasin Gishu County. The data from graduates, instructors and principals was collected using questionnaires. The use of questionnaires was adopted because they were affordable to administer, in a short time, to respondents' who were sparsely spread in the county. The questionnaires assisted the researcher to obtain quantitative data. Self-administered questionnaires were filled by second graduates, instructors and county polytechnic principals.

The questionnaires were used to save on time and to ensure that no interviewer bias (Kombo and Tromp, 2006). There were three different sets of questionnaires for graduates, instructors and county polytechnic principals. The questionnaires were organized according to the research objectives. Questions were prepared in the form of a five-point rating scale (*Likert scale*) to allow the respondents to give their opinion and suggestion. Questionnaire was found appropriate for this study because it was relatively cheap and faster to collect data from the County where respondents were sparsely spread (Smith, 2012).

The researcher, then contacted principals of the sampled TVETs and agreed on schedule especially on dates of visiting

each public VTC. Before administering the questionnaire on the agreed dates, the researcher explained the purpose of the study to the principals, instructors and second finalist trainees who had been sampled and invited them to fill the questionnaires which were self-administered. The instruments were collected by the researcher on the same date of administering them.

Validity refers to the extent to which instruments measure what they are intended to measure (Oso and Onen 2009). Therefore, the research instruments were developed under guidance of supervisors in Education, and Technology Department at University of Eldoret. The supervisors reviewed and analyzed the contents of the questionnaires in order to improve content validity of the instrument. The researcher then incorporated all suggestions and recommendations.

Reliability refers to the degree of consistency of results after repeated trials. The test items were administered to the same persons after one week to test stability of instrument over time, (Kasomo, 2015). Therefore, reliability was determined by a test-retest technique where by the researcher administered pilot questionnaires twice in two separate occasion in Nandi County. The data collected through piloting was tested using Cronbach Alpha coefficient with the aid of SPSS and an internal consistency reliability coefficient of 0.755. A score of above 0.7 was deemed to mean that the instrument was reliable since Mohsen Tavakol & Reg Dennick (2011) stated that any score between 0.7 and 0.9 is acceptable.

After all data had been collected, the researcher conducted data cleaning, which involved identification of incomplete or inaccurate responses then corrected them to improve the quality of the responses. The data was categorized, coded and entered in the computer for analysis using the Statistical Package for Social Sciences. Data was subjected to correlation analysis with the aid of statistical Package for social sciences (SPSS V26). The correlation analysis, was conducted to determine the intensity of the relationship between two variables and is indicated with the coefficient symbol of (r).

Results

Pearson moment correlation results of the study (Table 1) showed that there was a significant positive and strong relationship between competency levels of the technical skills and labour market requirements ($r = 0.565$, $p = 0.000$). This imply that an increase in competency levels of the technical skills led to an improvement of labour market requirements.

Table 1. Correlation between Competency levels of the technical skills and Labour market requirements.

		Labour market requirements	Competency levels of the technical skills
Labour market requirements	Pearson Correlation	1	.565**
	Sig. (2-tailed)		.000
Competency levels of the technical skills	Pearson Correlation	.565**	1
	Sig. (2-tailed)	.000	

** Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=60

The competency levels of the technical skills increase the labour market requirements. Similar views are also shared with Amimo (2012) who attributes the biggest challenge to

graduate employability in Kenya to today's pedagogical practices. The study further points that CBET programs produce competent TVET graduates with technical skills that are highly demanded by the labour market as opposed to traditional program graduates in same level of training.

Conclusions

The competency levels of the technical skills influence the labour market requirements. The study concluded that TVET institutions that were offering CBET programs had highly qualified and well-skilled staff who ensured that the learners training was delivered as per the market expectations compared to what traditional approaches. In addition to ensuring that their learning experience was unique due to blending of training and industrial attachments and research laboratory activities.

Recommendations

The Government needs to invest in training the youth to specifically meet the relevant industrial standards. The Government needs to put more effort towards eliminating the barriers that hinder youth from being employed, for example, work experience, nepotism, tribalism, gender bias and politics such as being 'connected' to employers.

In addition, practice of the skills learnt among the learners should be enhanced. This exposes the youth to the market before graduation and greatly elevates their competency levels. Furthermore, there should be more startup funding allocated by Ministry of Youth to support self-employment as the labour market gets saturated from time to time.

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