

Relationship between Technical and Vocational Acquired Skills and Skills Required in Job Market; Evidence from TVET Institutions, Uasin Gishu County, Kenya

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Abstract

Skills are a key driver for growth, employment and competitiveness: they lay the foundation for productivity and innovation. Investment in training is also an investment in innovation, since much technical change results from incremental innovations by skills workers and engineers on the factory floor. The purpose of this paper is to assess the relationship between technical and vocational acquired skills and skills required in job market. The study used questionnaires to collect data from 200 former graduates in technical and Vocational Education and Training (TVET) in Uasin Gishu County, Kenya. Study findings provide precursory evidence that some of the skill provided in TVET like Interpersonal skills, Personal qualities, Ability to use numerical data, Critical analysis, teamwork and experience are below what is required in the job market. Nevertheless, TVET institutions were offering adequate skills equal to what employers require such as Management skills, Thinking skills and Creativity and innovative skills .As such to focus on achieving Millennium Developmental Goals (MDGs), Policies and approaches to technical and vocational education and training (TVET) need to undergone major re-adjustment to upgrade the skills of those employed in new industries.

Keywords: Acquired Skills, Required Skills, TVET, TVSD, Job Market,

1. Introduction

Technical and vocational training are important instruments that are available to governments and the community to prepare individuals for a rapidly-changing increasingly-demanding world of work. In sub-Saharan Africa (SSA) and South Asia Technical and vocational skills development (TVSD) is moving up the agenda of governments and of donor agencies. In countries with a clear and long-standing policy commitment to TVSD, the provision of skills is in a much stronger situation than countries whose policies have been substantially influenced by shifts in donor policies and priorities (King and Robert, 2007). In relations, DETYA-funded report (2000) takes into account the relative importance of the skills required to the employers themselves and concludes that the greatest skill deficiencies among new graduates were perceived to be in the areas of creativity, oral business, communications and problem-solving. Unsuccessful applicants also lacked these skills but in addition they were perceived to lack the capacity for independent and critical thinking. The Report notes that this skill is of great importance to employers, and seems to be the skill that most sets apart successful from unsuccessful applicants:

In agreement, Afeti (2006) argues that TVET are important for their orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. TVET delivery systems are therefore well placed to train the skilled and entrepreneurial workforce that Africa needs to create wealth and emerge out of poverty. Nevertheless, the demand for skilled graduates in the labor market is not always matched acquired skills. In countries with either a general lack of jobs for TVSD graduates, TVSD is likely to remain less popular than general schooling. In countries like South Korea, China and Mozambique, where formal job growth has been sustained in recent years through both national and foreign direct investment, and where there has been policy commitment to quality work skills, demand for TVET has been strong (Adams, 2006).

According to Wheelahan and Curtin (2010) TVET qualifications should not only equip students with the knowledge and skills they need for work, but also ensure that they have adequate language, literacy and numeracy skills and foundation skills, green skills needed for a sustainable economy and society, technological skills, and the knowledge and skills they need for further learning as the basis for changes to their existing work and for occupational progression. Globalization continues to have a major influence on the need for flexible work skills and secondary education and skills training, of indifferent quality, will not do. Arguably, the many benefits claimed for TVSD, such as higher productivity, readiness for technological change, openness to new forms of work organization, the capacity to attract foreign direct investment and the achievement of Millennium development Goals, all depend on the quality of the skills acquired, and a dynamic environment in which they can be applied (King and Robert, 2007)

In Kenya, Business education is possibly the most significant change in education and training system. In the past decade there has been introduction of various skills at almost all levels of education and training in primary and



secondary education and from youth polytechnics. However, it is not clear the impact that business skills have (ILO, 2001). Providing young men and women with the skills they need to enter the marketplace is a crucial element in addressing youth unemployment, which affects an estimated 74.8 million youth worldwide (ILO, 2012). In Kenya, Technical Vocational Education and Training (TVET) can play a central role in preparing young people for work, but experts say that in many cases such programmes fail to respond to labor market needs. However, Johanson and Adams (2003) reveals that the existing public technical and vocational education training (TVET) system in Kenya suffers from critical problems including the decline of quality; lack of relevance to occupational and social realities: under-enrolment; and under-funding. This shows that Kenya faces a difficult future because the importance of skills and adequate training cannot be over-emphasized as it is expertise and technology that differentiates between the developed and developing countries such as Kenya. Unfortunately, the TVET system that is expected to play a critical role in this Endeavour by providing necessary skills that will catalyze the industrialization processes is in a sorry state.

In additional, few studies have aimed at addressing the association between required skills and acquired skills from TVET particularly in emerging economies. TVET programmes in Kenya target to absorb the large proportions of students who cannot progress to the secondary and higher levels of education. Out of the approximate 600,000 graduates of primary education, only 55% (350,000) proceed to secondary schools (Government of Kenya, 2006). At the end of the secondary cycle only 20,000 proceed to universities, the rest (200,000) are expected to be catered for by the middle level colleges and TVET institutions whose existing capacity is inadequate. In such a case, failure to find out if what is offered in the TVET institutions marches in what employer's require may lead to higher number of graduate remaining unemployed. It is against this background that this paper finds it necessary to assess the relationship between the acquired skills from TVET and required skills in the labor market.

2. Literature Review

Technical and vocational education (TVET) is broadly defined as education which is mainly to lead participants to acquire the practical skills, knowhow and understanding, and necessary for employment in a particular occupation, trade or group of occupations (Atchoarena, & Delluc, 2001). Such practical skills or know- how can be provided in a wide range of settings by multiple providers both in the public and private sector.

According to Bennell (1999) the role of TVET in furnishing skills required to improve productivity, raise income levels and improve access to employment opportunities has been widely recognized. In support, Nyerere (2009) assert that developments in the last three decades have made the role of TVET more decisive in the globalization process, technological change, and increased competition due to trade liberalization necessitates requirements of higher skills and productivity among workers in both modern sector firms and Micro and Small Enterprises (MSE). Skills development encompasses a broad range of core skills (entrepreneurial, communication, financial and leadership) so that individuals are equipped for productive activities and employment opportunities (wage employment, self-employment and income generation activities).

The root of the shortage of skilled labor can be traced to persistence of antiquated and unresponsive training mechanisms in vocational and technical systems which are not providing new entrants with appropriate skills (Lopez-Acevedo, 2003) A study by Taylor (2005) focused on school vocational education and training and found that youths undertook was explicitly focused on the acquisition of 'hard' skills and acquisition 'soft skills', was presumably incidental and their acquisition was assumed to occur largely by osmosis. Youths demonstrated a high awareness of the role that personal attributes and demeanors would play in obtaining and maintaining employment in the trades

In the same vein, Bank (2007) argues that people need new competencies for the knowledge economy which included skills in language, communication, logistical and mathematical thought, and problem solving skills, team working, negotiation skills, and self - confidence and developing social networks. This was echoed by The OECD (2010c) that skills such as basic skills and digital age literacy; academic skills; technical skills; generic skills; soft skills and leadership skills were necessary in the labor market.

3. Methodology

Descriptive survey design method was used in collecting the data and the questionnaire was, developed based on the theoretical framework. The data was collected from respondents and included former graduate of TIVET institutions in Uasin Gishu both private and public. Data was collected from the end of May 2013 to end July 2012. A list of graduate from 2011-2012 was obtained from the registrar records in TIVET institutions. The researchers contacted 200 former graduates of TVET but only 120 former graduates were willing to participate in the study. Five point likert scale questionnaire was designed to gather primary data from the respondents. A five-point Likert-type scale was also used. The rating scale is: Strongly Agree [5], Agree [4], Neutral (3) Disagree [2], and Strongly Disagree [1]. Data was analyzed using paired t test to find the statistical differences between the acquired and required skills, while spearman correlation was used to find linear relationship between the required and acquired.



4. Results and Discussion of the Findings

This section discusses the findings in relation to previous studies. To ensure reliability of the research instrument, Cronbach Alpha provided a reliability coefficient alpha of 0.871 obtained for all survey questions. Thus, the survey instrument was considered to possess adequate internal consistency reliability. This section presents the findings. The findings in table 1 showed that there was high relationship between the programme offered in TVET and helping to secure a job.

Table 1: Correlation Results between Program Offered and Obtaining Job

Spearman's rho

Spearman's mo		
	Kindly specify your vocational training program	Has the vocational training program helped you to obtain your current job
Kindly specify your vocational training program	1	
Has the vocational training program helped you to obtain your current job	.526*	1

^{*} Correlation is significant at the 0.05 level (2-tailed). Survey data (2013)

Findings in Table 2 indicated that graduate in TVET institutions had high interpersonal skills (mean =4.25) but not as high as what was required by the employers (mean=4.58). Further results showed there was statistical difference between acquired interpersonal skills and required skills. Thus, we imply student had acquired less interpersonal skills than what was required in the labor market (t=-3.185, ρ <0.05). Correlation results showed a negative relationship between the acquired skills and required skills (r=-0.251, ρ <0.05). The findings are echoed by Raybould & Sheedy (2005) that employers are looking for vital interpersonal skills in graduates, which can be obtained during study and period of work experience rather than degree of specific knowledge. Similar findings were observed in Quek (2005) that employers prefer employees who have generic competencies of interpersonal skills for work performance such as leadership skills, teamwork, oral and written skills

In relation to teamwork, graduates were not able to meet the required skills by the job market. In addition, there was a statistical difference between acquired team work skills and the required skills (t=-3.941, ρ <0.05). Thus, the study imply that students had less acquired team mean=4.41) work skills than that which was required (mean =4.72) (.Correlation results affirmed that a positive relationship existed between acquired skills and the required skills (r=0.299, ρ <0.05)

Findings on the personal qualities portrayed by the students showed that the said students had higher acquired skills (mean=4.14) but not as high as the required skills (mean=4.47). Further findings showed that there was a statistical difference between acquired personal qualities and required personal qualities (t=-4.087, $\rho<0.05$). Correlation results showed that there was a positive relationship between acquired skills and required skills (t=0.184, $\rho<0.05$). In the current situation, employees are not only being evaluated from the qualification certificate, but their personality plays an important part in determining whether they will be employed. In support, Challa (2007) opined that the required skills were applicable to any field of work and that employer's state personal traits and skills are the most important contributing to being employed.

Cognate to ICT skills, students had acquired high ICT skills (mean=3.78) but not as high as the required skills (mean=3.79). Findings also revealed that there was no statistical difference between acquired ICT skills and the required ICT skills (t=-0.121, $\rho<0.05$). In addition, correlation results showed positive relationship between acquired and required skills (t=0.383, $\rho<0.05$). Another skill perceived important is technology skills, hence, the skills in technology seem to be highly demanded in this current situation as globalization impacts employment. In support Kuo, Ho, Lin, & Lai, (2010) argued that as technology continues to change; it has been a current trend of incorporating technologies into the workplace. By that, employees with the technology skills are required in today's job market since they are valuable in understanding the importance of technology usage. Communication skills are required to deal with the information exchange among workers. In agreement, Salleh et al (2010) discussed that today, workforce situations are more about dealing with global markets and communication skills especially English is a must for better communication and information sharing. As for business purposes, communication skills are requirements in dealing in international business.

In relation to management skills, student had acquired high management skills (mean=4.11, ρ <0.05) as compared to the required skills (mean = 3.85). There was also a statistical difference between the acquired and required skills (t=2.359, ρ <0.05). Further, correlation results showed a negative relationship between the required and acquired skills (r=-0.071, ρ <0.05).



Also, findings illustrated that there was high creativity and innovative skills acquired (mean=4.65) compared to the skills that was required (mean =3.87). Further findings illustrated that there was a statistical difference between acquired creativity and innovative skills and those that were required. Therefore, students had high levels of creativity and innovative skills compared to those required in the job market (t=8.151, ρ <0.05). Correlation results showed a positive relationship between the required and acquired skills (r=0.092, ρ <0.05)

The skills acquired on ability to use numerical data (mean = 3.81) were not as high as the required skills on the ability to use numerical data (mean = 4.38). In addition, there was a statistical difference between acquired skills on ability to use numerical data and the required skills on the ability to use numerical data (t= -3.906, ρ <0.05). The correlation results showed a positive relationship between acquired and the required skills (r=0.031, ρ <0.05)

In relation to ability to work in a team, findings illustrated that the skills acquired on ability to work in a team met the required skills. Further findings illustrated that there was no statistical difference between acquired ability to work in a team and required ability to work in a team.

Findings on acquired spoken communication skills revealed that it was higher than the required spoken communication skills (mean=4.6). Correlation results showed a negative relationship between the acquired skills and required skills (r=-0.344, ρ <0.05). TVET institution graduates had the required spoken communication skills since it is required in almost every field of life and also the art of effective communication is simple. According to Kaijage, (1997) in the current workforce, communication skills such as ability to communicate effectively through English is highly demanded by employers as to carry out daily routines. English is seen as an important skill today because work environments are dealing with global business and require English language as the main communication medium.

It was also indicated that graduates in TVET institutions had high problem solving skills (mean =4.18) but not as high as what was required by the employers (mean =4.28). Correlation results showed a negative relationship between the acquired skills and required skills (r=-0.099, ρ <0.05). Findings on critical analysis illustrated that graduates had acquired critical analysis skills (mean=3.31) but not as high as the one required by the employer (mean = 4.33). Further findings illustrated that there was a statistical difference between acquired critical analysis skills and those that were required (t= -7.35, ρ <0.05).

It was also illustrated in table 1 that graduates had acquired high skills on qualifications (mean = 4.46) but the high skills were not as high as the required skills by the employer (mean = 4.59). The findings are therefore in agreement with (Karmel, Mlotkowski and Awodeyi, 2008) that the relationship between qualifications skills and occupations is quite loose, except for some regulated trades such as electricians and professions such as physicians.

In relation to experience, the acquired skills were high (mean=4.14) but not as high the required skills, (mean=4.36) Further findings illustrated that there was a statistical difference between acquired skills and those that were required (t=-2.231, ρ <0.05). The organizational skills acquired (mean=4.37) were high compared to the required skills by the employer (mean =4.29). Graduates of TVET institution were able to assist in planning correctly the projects to be completed and prevented inconvenience and difficulties when finishing tasks. Therefore, their organizational skills were higher than the required skills by the employer.

In relation to self confidence, the acquired skills were high (mean=4.36) but not as high as the required skills by the employer (mean =4.5). There was self-efficacy and self-esteem among the graduates and this was revealed in their ability to master skills and achieve their goals and also accept difficult challenges but their self confidence did not meet the required skill by the employers



Table 2: Statistical Difference and Relationship between Acquired Skills and Required Skills

	Mean				
	Acquired skills	Required skills	Std. Error Mean	T	Correlation
Interpersonal skills	4.25	4.58	0.105	-3.185*	-0.251*
Team work	4.41	4.72	0.078	-3.941*	0.299*
Personal qualities	4.14	4.47	0.082	-4.087*	0.184
ICT skills	3.78	3.79	0.106	-0.121	0.383*
Management skills	4.11	3.85	0.112	2.359*	-0.071
Thinking skills	4.76	4.55	0.082	2.579*	-0.019
Creativity and innovative skills	4.65	3.87	0.096	8.151*	0.092
Ability to use numerical data	3.81	4.38	0.148	-3.906*	0.031
Ability to work in a team	4.55	4.55	0.08	0	0.015
Spoken communication	4.6	4.56	0.092	0.418	-0.344*
Problem solving skills	4.18	4.28	0.09	-1.133	-0.099
Logical thinking	3.95	4.15	0.132	-1.553	-0.093
Critical analysis	3.31	4.33	0.14	-7.35*	0.096
Commercial awareness	4.14	4.19	0.121	-0.424	-0.24*
Ability to learn	4.65	4.71	0.1	-0.514	-0.317
Qualifications	4.46	4.59	0.08	-1.597	0.385
Capacity to work autonomously	4.36	4.37	0.122	-0.105	-0.346
Experience	4.14	4.36	0.098	-2.231*	0.63
Organizational skills	4.37	4.29	0.079	0.973	0.461
Self confidence	4.36	4.5	0.151	-0.932	0.133

^{*} Significant at the 0.05 level.

Survey data (2013)

Finding in table 3 illustrated that the skills developed on course by the graduates enabled them to become more employable (mean 3.31), this is basically because the graduates had acquired appropriate skills and personal attributes required in the job market. Also, there experience of being a student has made them more employable (mean=3.26). The graduates also affirmed that the subject they did is an advantage in seeking employment (mean=3.73) and the institution that they were in is of advantage in looking for employment (mean=3.29). Further, the experience of being a student has enhanced their social and intellectual (mean=4.24). It was revealed that the graduates have the skills employers are looking for when recruiting for the kind of jobs they want (mean=4.4). The subject the graduates have studied is an advantage in looking for employment by broad subject group (mean=4.06), hence the graduates have the skills employers are likely to be looking for when recruiting for the kind of jobs they want (mean=4.14). Finally, the university the graduates attended is an advantage in looking for employment (mean=4.14)



Table 3: Perception on Acquired and Required Skills

	Mea n	Std. Deviation
	11	Deviation
Skills developed on course have made me more employable	3.31	1.804
Experience of being a student has made me more employable	3.26	1.418
Subject i did is advantage in looking for employment	3.73	1.028
Institution i was is advantage in looking for employment	3.29	1.644
Experience of being a student has enhanced my social and intellectual	4.24	0.983
I have the skills employers are looking for when recruiting for the kind of jobs i want. The subject i have studied is an advantage in looking for employment by broad subject.		0.843
group Have the skills employers are likely to be looking for when recruiting for the kind of jobs	4.06	0.744
for which i want to apply	4.14	0.734
The university i attended is an advantage in looking for employment	3.47	1.585

5. Conclusion and Recommendation

Based on the above the findings the study provide precursory evidence that some of the skill provided in TVET like Interpersonal skills, Personal qualities, Ability to use numerical data, Critical analysis, teamwork and Experience are below what is required in the job market. Nevertheless, TVET institutions were offering other skills beyond what employers require for instance from the findings Management skills, Thinking skills and Creativity and innovative skills were adequately offered in TVET institutions. Interpersonal skills are the skills that are essential for the survival at the working world that enhances employability. Employers are no longer interested in hiring graduates who have only specific skills, but lack other relevant skills, especially the soft skills. To achieve organization goals, employee skills become assets that are valuable as capital and are acquired throughout a lifetime. Provision of Communication skills by TVET institution is important in the current demand for highly competitive labor market, thus, Poor levels of communication skills will automatically affect the organization's business.

Individual's knowledge and skills are continuously changing according to globalization influenced demand and the job market itself. Graduates may perceive that they possess the knowledge and skills required by employers, while employers actually look at different things. In this competitive era, career changes are due to globalization and this automatically changes what skills graduates need to fulfill the needs of employers. In global competition, new skills set are creating the need for organizations that can respond rapidly to market demands. As such to focus on achieving MDG, Policies and approaches to technical and vocational education and training (TVET) need to undergone major re-adjustment to upgrade the skills of those employed in new industries. Also, curriculum developers need to consider soft skills apart from Hands on- there is problem with attitudes towards TIVETS. More complex skills are needed to effectively cope with the accelerating technological change is essential to build capacity of TVET teachers for the required transformation. The study was limited only to formers graduates of TVET institutions, therefore future research need to include employers as primary target.

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