Influence of Trainees' Entry Qualification on Skill Development for Kenya's Realization of Her Development Agenda

Selina Chepkoech[1,*], Ibrahim khatete[1], Genevieve Wanjala[1]
[1]*University of Nairobi, Department of Education Administration and Planning*
**Corresponding author*

Abstract: **The purpose of the study was to examine how entry qualifications of trainees at Technical Vocational, Education and Training (TVET) institutions impact on skill development for Kenya's development agenda. The study was a qualitative case study of three cohorts (2016, 2017 and 2018) being the groups that had done national examinations set by Kenya National Examinational Council (KNEC) at the time the study was carried out. Data was gathered using questionnaires and document analysis. Data analysis involved verification of the entry requirements for one to be enrolled in a given course vis-a-vi the policy governing admissions, actual enrolments in the courses offered and trainees' performances at the Kenya National Examinational Council examination. The study established that there was strong correlation of 0.798** in a 2 tailed test between trainees' initial qualifications and academic achievement, a measure of skill formation. However initial entry qualification of trainees was generally low with over 60 percent of the trainees having scored grade D+ and below in their pre-entry examination leading to poor academic achievement, a state that was more pronounced in Science oriented courses. It was further established that the main cause of low achievement of the trainees in the science oriented courses investigated were that the trainees had registered for the courses based on the minimum grade requirement but had poor grades in Science subjects. These findings indicated that Kenya was unlikely to achieve a manpower development needs if this trend continues. As such the study recommends for the need to revise minimum requirements in the cluster subjects to be considered for admission to various courses. The institutes should provide proper career guidance for prospective trainees to help them make informed choices regarding courses to be pursued not only on the basis of their interests but also on their academic abilities as demonstrated in their entry examination performances.**

Key Words: **Entry Qualification, Development Agenda, Realization, Skill Development**

I.INTRODUCTION

The report of the World Bank youth Summit of 2018 whose theme was "Unleashing the Power of Human Capital", identified the level of a country's human resource inventory as reflected by the state of competency, skills and knowledge possessed by her citizens as critical element for driving its development agenda. Similarly, the United Nations Millennium Development Goals (MDGs) identified employability as a key weapon in poverty eradication. Employability harnesses the capacity of people and the firms where they work, which are key ingredients of economic development ([UNDP] (2010). According to Murgor, Keter, and Changa'ch (2014) skill formation is perilous in development due to its contribution in enrichment of individuals' competitiveness on labor market as well as its ability to lay ground for productivity and innovations.

Kenya, as a signatory to International Convention on Sustainable Development Goals (SDGs) embarked on reforming Technical, Vocational Education and Training Institutions (TVET) with the view of ensuring that her citizens are endowed with essential productive skills that are to drive her poverty eradication agenda. The agenda is inclined to SDG goal No 4 which acknowledges quality of Education to be critical in skill development of individuals and a step towards the attainment of SDG goal No 8 that calls for promotion of decent work. With poverty eradication, Kenya desires to achieve high economic status and high quality life for her citizens by achieving industrialized middle income status. The target for achievement has been set to be by the year 2030 (RoK, 2007).

Various policy documents and development Plans attest to the fact that the desire to attain industrial status and high quality life for her citizens has been Kenya's long standing objective since independence with the latest being Kenya Vision 2030(RoK, 2003, RoK, 2007, 2013a). Kenya's Vision 2030 economic pillar envisages Kenya to have achieved industrial status by the year 2030.Under this state, citizens are supposed to enjoy high quality life .To achieve this dream, the annual economic growth rate of 10 percent was anticipated by 2012 and expected to be maintained or exceeded thereafter. Seven key areas have been earmarked as drivers of this dream. These are: tourism; Wholesale and retail trade; Agriculture and livestock; manufacturing; financial services; oil and mineral resources as well as business process outsourcing/IT Enabled Services (ITES) (RoK, 2013a).

Despite initiating reforms in TVET institutions to enhance hence her skill inventory, there has been no marked improvement in performance of her various sectors of the economy. For instance, Kenya County Facts Sheets (2013b) gave poverty Index to index of 47.6 percent a time when Kenya National Strategy Paper 2014-2018 observes that there

was a shortage of 90,000 Technicians 30,000 Engineers, and 400,000 Artisans. This state could a pointer to an issue of the quality of skill development. A among the determinants of quality training, the quality of entry behavior of trainees is critical

Ghazlan (2012) observed that, the Human Resource (HR) level of developed countries such as South Korea have a certain pattern of key qualities, among them are; higher academic qualifications of trainees that promote knowledge development, creativity and innovation and high productivity. Ghazlan concluded that desired economic development of any country can only be achieved if TVET institutions are able to attract qualified students. This may imply that trainees entry behavior which refers to what the students had previously learned before enrolling at TVET, intellectual ability and development, motivational state, and certain social and cultural determinants of the learners ability determines the level of readiness of one to learn and hence have an impact on terminal behavior as reflected by achievement at the end of the course.

Writing on entry qualification of trainees, Ladipo, Akhuemonkan and Raimi (2013) observe TVET institutions have been profiled in most developing countries to be for low academic achievers. This situation has led to majority of high academic achievers to shun them, hampering development of quality skills. Agrawal(2012) and Ladipo, Akhuemonkhan and Raimi (2013) observed that students who tend to enroll in TVET institutions are generally low academic achievers, a popular consensus that mirror TVET participation in both developing and developed countries. The authors opine that this is a logical inference considering relatively low eligibility requirements and status accorded to TVET options. This is what makes TVET programs in both developed and developing nations to be seen as a "second class option'' for education and training.

Kerre (2012) and Sang, Muthaa and Mbugua (2012) in their studies on skill development observed that the ability of TVET institutions to produce quality and standards skills demanded by the industry is affected by entry qualifications of candidates who enroll at TVET institutions. Studies done in Egypt, Nigeria, Zimbabwe and Tanzania indicate that reduced internal efficiency in these countries is affected by students' challenges among them being poor performance in examination. This situation is attributed to lack of pre-requisite skills and low morale of students to study due to the belief that TVET is meant for academically weak students .This could be an indicator as to why undeveloped countries lag behind in economic development as compared to developed countries such as Singapore and Korea who recruit learners to these institutions from among the high achievers. Undeveloped countries face a challenge of producing competent human resource to meet industrial demands of the economy. Use of TVET institutions to accelerate economic development in Kenya has remained a challenge so long as the institutions recruit from among the academic failures. Ly(2018) states that ability of TVET institutions to achieve the desired results of development of quality manpower to drive social economic development of any country may not come to fruition as long as the parents and their children continue regarding TVET institutions as training institutions of last resort.

Changilwa et al (2016) in their study entitled "Challenges *Facing the Effective Implementation of Artisan and Craft Courses in Catholic Sponsored Community Colleges in Nairobi, Kenya*" as cited by Chepkoech, Khatete and Wanjala (2020) found out that low entry qualifications of Trainees posed a challenge on effective implementation of the curriculum. However, the situation is different in Philippine. Philippine is among few countries in the world with the best TVET system. The enrollees at the TVET institutions are primarily graduates, secondary school leavers and college graduates who wish to advance their competencies and skills in different fields and occupations.

In spite of the Kenya government embarking on reforms to change perception of the public towards TVET institutions, the institutions continue churning out low quality graduates. The government has revamped the TVET institutions, increased financial levels but these have not assisted. The campaign to the public that the institutions were not meant for academic failures has not similarly bore fruits. The study therefore endeavored to examine hoe the entry qualifications for the trainees at TVET institutions is impacting on Kenya's skill development for the realization of her economic development. This is what the study set to establish.

Objectives of the Study

The study set to establish;

1) The impact of entry qualifications of trainees in various courses at TVET institutions on trainees' skill formation for the realization of Kenya's development agenda
2) Influence of Enrolment levels of trainees in various courses on trainees' skill formation for the realization of Kenya's development agenda
3) How academic achievement of trainees in standardized examination in various courses impact on trainees' skill formation for the realization of Kenya's development agenda

The study was guided by the following hypothesis;

Ho_1: There is no significant relationship between impact of entry qualifications of the trainees in various courses at TVET institutions and trainees' skill formation on realization of Kenya's development agenda

II. METHOD AND METHODOLOGY

The study was guided by correlation research design. The study targeted trainees in 10 randomly sampled TVET institutions that had been in existence for a period of at least five years at the time of the study in Western region of Kenya

whose findings formed a basis of generalization. Questionnaires, interview schedule and document analysis guide were principal instruments that were used in data collection. One hundred heads of departments and the graduates of 3 cohorts of TVET institutions that had taken KNEC examination before the study (2016, 2017, and 2018) were sampled for focus group discussion.

III. FINDINGS AND DISCUSSION

Minimum Academic Requirements for Various Courses

The first objective sought to establish entry qualifications of trainees for various courses. This was critical in evaluating how the quality of skill formation was influenced by trainees' entry qualification. The study that established minimum qualifications for various courses at TVET institutions was set by the ministry of Education. The Courses were classified as Artisan, Craft, Diploma and Advance Diploma whose minimum entry qualifications are; KCSE D- or KCPE, KCSE D, KCSE C- or relevant Diploma for Artisan; Craft, Ordinary Diploma and Advanced Diploma respectively. However, it was found that although government set the minimum entry requirement for those desiring to join TVET institutions, some diploma courses such as Pharmacy had a higher minimum entry requirement set at a mean grade of at least C plain at KCSE this requirement bared the KCPE leavers from admission to the course. Generally the findings revealed that the entry prerequisite for most TVET courses were largely low with over 60 percent of the trainees having scored D+ and below in their pre-entry examination. The low entry requirements for various courses were likely to affect negatively the skill development of the trainees in most technical courses.

Table 1. Enrollment of Trainees in various Courses

Variable		Area of Specialization				
		Artisan	Craft	Diploma	Higher Diploma	Total
Gender	Male	835	1898	1240	43	4016
	Female	229	2254	1584	21	4088
	Total	1064(13.13%)	4152(51.23%)	2824(34.84%)	64(0.79%)	8104

Table 1 indicates that the majority of the Trainees at TVET institutions under study pursued Craft and Artisan course (over 64 %). Though the Kenya National Strategy Paper 2014-2018 showed that there was a deficit of 30,000 Engineers, 400,000 Artisans and 90,000 Technicians, the TVET institutions were unlikely to have the capacity to bridge gaps in view of low level of the courses the trainees enrolled in.

At this point the researchers wanted to know the actual qualifications of the trainees in the various programs in the institutions. This was intended to help establish the quality of trainees as reflected by their entry behavior at TVET institutions and how it impacted on skill development. The findings are presented in Table 2

Table: 2: Qualification of Trainees Pursuing Various Courses at Study institutions.

Qualification	D	D+	C-	C	C+	B-	B	Total
Frequency	1514	3687	1645	670	267	251	70	8104
Percentage	18.68	45.50	20.30	8.27	3.29	3.10	.86	100

The findings in Table 2 showed that the majority of the trainees (over 60%) had a qualification of a D plus (D+) and below. This implied that a majority of the trainees had a weak academic background**.** However, it was imperative to find out actual enrolment in on basis of qualification. The breakdown is reflected in Table 3.

Table 3: Breakdown of Entry Qualifications and Enrolments to various Courses

	Medical &Applied	ICT	HIM	Business	Liberal	AGR	Build	Auto	Electrical	Total
B	54	0	0	0	0	0	2	0	14	70
B-	189	0	0	0	0	0	14	7	41	251
C+	143	27	0	9	0	0	12	30	46	267
C	248	89	34	57	0	28	25	19	170	670
C-	48	178	234	313	112	59	370	258	73	1645
D+	0	314	957	1112	171	119	728	276	10	3687
D	0	51	387	281	67	147	196	87	0	1514
TOTAL	990	659	1612	1763	350	353	1347	677	353	8104

Table 3 reveals that all courses save for courses in Medical and applied, build and Electrical had enrolment of trainees with very low entry qualifications at C. The low grades were likely to compromise capacity of the trainees to master essential skills that had been visualized to be key ingredient for achievement of economic development.

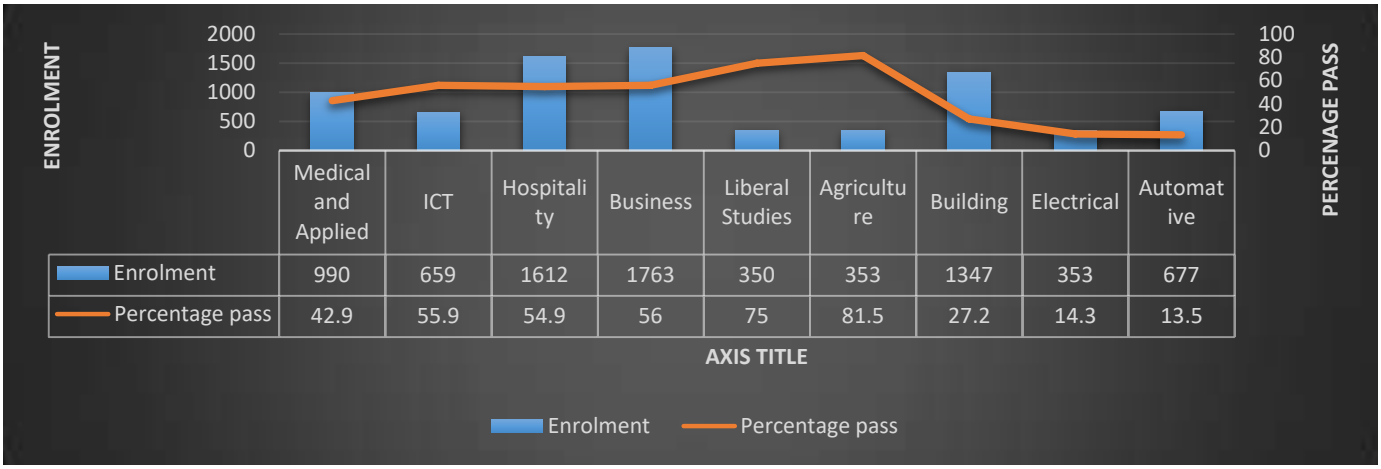
These findings concur with those of Changilwa, Akala and Wambua (2016) as cited by Chepkoech,Khatete and Wanjala (2020) who observed that low entry qualification of trainees manifested by their poor communication skills. This posed a major challenge for effective implementation of Artisan and Craft Curriculum in TVET institutions.

Trainees Performance in National Examination at Study Institutions

The study further sought to establish the performance of trainees in national examination. This was aimed at

establishing whether there was any relationship between trainees' entry qualifications and academic attainments. Data to answer this objective was captured through document analysis of results of previous 3 cohorts in national examination 2016, 2017 and 2018 before the study was conducted. The results are shown in figure.

Figure1: Enrolment of Trainees in Various Courses and Percentage Pass in KNEC Examination



The study revealed that pass rate in national examinations was highest in Agriculture (81.5%) and Liberal Studies (75%). However, pass rate was lowest in automotive (13.5%), Electrical (14.3%) and Building (27.2%). The results contradict the expectations as these are the courses that had better entry marks at B+ as shown in table 3. In one institution, document analysis revealed that out of 15 Trainees who did mechanical engineering examination, all of them (100%) failed. Such mass failure is likely to discourage potential Trainees from pursuing such courses, a situation that negatively impact on development of appropriate human resource for several sectors of the economy. These findings concurs with Ngure (2014) who found out that more than half of the motor vehicle Mechanics candidates had failed the practical tests, posing a serious challenge for graduates employability.

The study further sought to establish whether there is any correlation between entry qualification and academic achievement. The results are reflected in Table 4

Table: 4: Correlation between Positive Statements on Entry Qualification of Trainees and Academic Performance at Study Institutions

		X1	X2	X3	X4	X
Influence of Initial qualification on pass rate (X1)	Pearson Correlation(sig-2tailed) N	1 94				
Entry qualification is low (X2)	Pearson Correlation(sig-2tailed) N	.823** 94	1 94			
Low minimum qualification kept off bright Trainees (X3)	Pearson Correlation(sig-2tailed) N	.785** 94	.783** 94	1		
Initial qualification influence on choice of the course (X4)	Pearson Correlation(sig-2tailed) N	.864** 94	.731** 94	.798** 94S	1 94	
Mean score in National exams	Pearson Correlation(sig-2tailed)	.798**	.754**	.914**	.856**	1

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

As Table 4 indicates, there was a strong correlation between trainees' initial qualification and academic achievement which is a measure of human resource development. This is shown where there is high correlation among variables above .750 in a 2 tailed test at 0.01significance level.

Further to Correlation, a Regression Analysis was undertaken. The results are given in Table 5

Table: 6: Regression analysis of initial Qualification of trainees and Academic Performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	3.650	.037		97.429	.000
Low entry minimum requirement kept off bright Trainees	705	.012	.914	59.018	.000
Dependent Variable: The means score					

Table 6 shows that the statement that postulated that low entry minimum requirement had kept off bright trainees had a value 0.000 in significance column. This implied that there was significant agreement among the respondents on the same. Therefore it was likely to imply that TVET institutions may have attracted trainees of low academic qualification.

From the Table, the following regression equation was derived;

Y=3.65 + aX where a=.914

Therefore Y=3.65 +.914X

From the regression equation, it can be interpreted that an increase in trainees initial qualification by one percent would have led to increase in mean score by .914 percent. In other words, initial qualification of Trainees accounts for 83.5 percent of academic attainment in the national examination. This is further confirmed on examination of Significance column in the Table above where the variables have .000 in significance column, a value below 0.05 (5% confidence level).

Therefore on the basis of Tables 4 and 5, the Null hypothesis stating that;

Ho_1: There is no significant relationship between the entry qualifications of the Trainees admitted in TVET institutions and trainees' skill formation on realization of Kenya's development agenda was upheld.

These findings affirm the findings of Nkirina(2010), who found that a strong grounding in basic skills to do with arithmetic, competency in the language of curriculum delivery influences the effectiveness of any training program. This position is further affirmed by Changilwa et al (2016) as cited by Chepkoech, Khatete and Wanjala(2020) who found out that low entry qualification of Trainees posed a challenge on effective implementation of the curriculum.

Therefore on the basis of the findings in Table 2 that the majority of the trainees (over 60%) had a qualification of a D plus (D+) and below, it may be reasonably concluded that TVET institution were not in position manage to produce quality manpower to facilitate Kenya's development agenda.

Implications of the Study

There is need to revise the minimum entry admission requirement more so for Science inclined courses that include the setting up of certain minimum attainment in cluster subjects beside the general minimum entry requirement as a way of improving on trainee performance at national examinations. Similarly there is need for proper guidance and counseling so that trainees can make informed career choices based on their ability. This will address the issue of mass failure among Trainees and promote ability of TVET to produce manpower both in qualitative and quantitative terms as a way of addressing country's development aspiration,

IV. CONCLUSIONS

On the basis of study findings, entry qualification of trainees in TVET institutions was a major barrier to skill development more so in Science inclined courses as reflected by mass failures in standardized national examination and was an issue that demands for urgent attention if the country is to be able to use TVET institutions as an avenue for her manpower development.

REFERENCES

[1] Agodini, R., Uhl, S., & Novak, T. (2004). Factors That Influence Participation in Secondary Vocational Education. MPR Reference No. 8879-400. Mathematica Policy Research, Inc.

[2] Agrawal, T. (2012). Vocational education and training in India: challenges, status and labour market outcomes. Journal of Vocational Education & Training, 64(4), 453-474..

[3] Akey, T. M. (2006). School Context, Student Attitudes and Behavior, and Academic Achievement: An Exploratory Analysis. MDRC

[4] Akhuemonkhan, I. A., & Raimi, L. (2013). Impact of quality assurance on technical vocational education and training (tvet) in Nigeria. In Presentation at the 2013 IVETA Annual Conference on Quality Assurance in Technical-Vocational Education and Training (TVET), Las Vegas, Nevada, United State on December (pp. 3-4).

[5] Chepkoech, S., Khatete, I., & Wanjala, G. (2020). Impact of infrastructure at technical vocational education institutions on human resource development on realization of sustainable development goals in Western Kenya. Journal of Emerging Trends in Educational Research and Policy Studies, 11(1), 18-24.

[6] Ghazlan, G. (2012). Mainstreaming skills training: Malaysia's skills and the future. SKILLS PATHWAYS ASIA, 67.

[7] Kerre, B. W. (2010). Inaugural Lecture: Technical and Vocational Education and Training (TVET): a Strategy for National Sustainable Development. Moi University Press.

[8] Ladipo, M. K., Akhuemonkhan, I. A., & Raimi, L. (2013). Technical Vocational Education and Training (TVET) As a Mechanism for Sustainable Development in Nigeria (SD): Potentials, Challenges and Policy Prescriptions. TVET for Sustainable Development in Africa" Held in Banjul, The Gambia from 2 nd To 8 th June 2013 at The Paradise Suits Hotel, 12.

[9] Ly, B. (2018). The impact of TVET on Cambodia's economic development.

[10] Murgor, K. T., Keter, K. J., & Changa'ch, J. K. (2014). Accessibility of technical and vocational training among disabled people: survey of TVET institutions in North Rift Region, Kenya.

[11] Ngure, S. W. (2013). Stakeholders' perceptions of technical, vocational education and training: the case of Kenyan micro and small enterprises in the motor vehicle service and repair industry.

[12] Nkirina, S. P. (2010). The challenges of integrating entrepreneurship education in the vocational training system: An insight from Tanzania's Vocational Education Training Authority. Journal of European Industrial Training, 34(2), 153-166

[13] RoK (2003).Ministry of Planning and National development: Economic Recovery Strategy Paper for Wealth and Employment Creation. Nairobi, Government Printers.

[14] RoK.(2007).Kenya Vision 2030. Nairobi, Government Printers

[15] RoK(2013).Towards A Globally Competitive Quality Education for Sustainable Development. Report of Task on the Re-Alignment of the Education Sector to the Constitution of Kenya 2010.Nairobi, Government Printer.

[16] RoK(2013).Kenya Fact Sheet. Nairobi, Government Printers

[17] Sang, A. K., Muthaa, G. M., & Mbugua, Z. K. (2012). Challenges Facing Techinical Training in Kenya. Creative education, 3(01), 109.

[18] Tilak, J. B. (2003). Vocational education and training in Asia. In International handbook of educational research in the Asia-Pacific Region (pp. 673-686). Springer, Dordrecht.

[19] United Nations Development Programme [UNDP]. (2010). Skills gap analysis for graduates of youth polytechnics, vocational training centres and out of school youths. Nairobi: Government of Kenya.