



# Teacher Factors Affecting Implementation of Curriculum in Technical and Vocational Education and Training Institutions in Uasin Gishu County, Kenya

Bosire, Thomas M. and Prof. Kisilu Kitainge  
University of Eldoret.

## ARTICLE INFO

### Article history:

Received: 13 October 2020;

Received in revised form:

16 November 2020;

Accepted: 26 November 2020;

### Keywords

Teacher,  
Factors,  
Implementation,  
Curriculum,  
Technical.

## ABSTRACT

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 teacher factors affecting implementation of curriculum in technical and vocational education and training institutions in Uasin Gishu County, Kenya. The target population of the study was 250 respondents comprising of 10 principals, 240 instructors. A sample size of 75 respondents was selected. Stratified purposive and simple random sampling techniques was employed. Questionnaires were used to collect data. Data was analyzed pearson product moment correlation. Findings of the study showed that there was a significant influence of tutor qualification ( $r=0.555$ ,  $p=0.00$ ) and tutor experience ( $r= 0.445$ ,  $p =0.000$ ) on implementation of curriculum in TVETs. The teacher qualifications and teaching experience influence the implementation of Technical Curriculum. The study concluded that teacher qualifications, teaching experience influence the implementation of Technical Curriculum. TVET colleges should employ more qualified teachers in order to enhance teacher competence in order to spur and sustain students' interest in technical education. The management should build the capacity of teachers to ensure that community colleges have an experienced pool of teachers that can effectively implement the Technical Curriculum.

© 2020 Elixir All rights reserved.

## Introduction

Education is a medium through which the social values and norms of the learners are transmitted through the formal schooling system. Onyesom (2013) identified formal education as a vital instrument for attaining technological progress and economic growth judging by the experience of industrialized nations. As viewed from the policy perspective, investing in education is a potent means that could be explored to fast-track technological progress, economic growth and boosting citizens' capacities (Orodho, 2002). TVET is used 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 practical skill, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (UNESCO, 2002). TVET, in this respect, is designed to equip the people with not only vocational and technical skills, but also with broad range of practical skills, attitude and knowledge that are imperative in the work place and life.

Globally Technical and Vocational Education and Training (TVET) are an education, training or learning activity which provides knowledge, skills and attitudes relevant for employment or self-employment. TVET describes all kinds of formal, non-formal and informal training and learning wherever it occurs as institutes, schools, training centers' or in the workplace/site of production, Bureau of Manpower, Employment and Training (BMET), (2014) also indicated that the Program works to strengthen

national and provincial structures within the TVET sector and builds the capacity of local training providers to deliver courses focused on employment and income-generation outcomes within a nationally recognized framework, (Nyerere, 2000).

UNESCO leads the global debate by advocating for the rethinking of TVET to enhance its role in developing more equitable and sustainable societies. From 14-16 May 2012 UNESCO convened the Third International Congress on TVET in Shanghai, Transforming TVET: Building Skills for Work and Life, which resulted in the adoption of the Transforming technical and vocational education and training (TVET): Developing TVET should be a top priority in the quest to build greener societies and tackle global unemployment, concluded participants at the 3<sup>rd</sup> UNESCO TVET Congress that ended in Shanghai on 16 May 2012. More than 500 representatives from 107 countries attended the Congress, which looked at ways of transforming TVET to make it more responsive to the needs of 21st century, UNESCO (2012).

Nguku Everlyne (2012) posited that empowering vocational and technical education teachers and students through educational curriculum reforms is of great importance in Nigeria because vocational and technical education training of teachers had no philosophy that would provide unity and direction of their practice. He further stated that the delivery of education in Nigeria has suffered from year of neglect, compounded by inadequate attention to policy framework within the sector. Findings from an

ongoing educational sector analysis confirm the poor state of education in Nigeria.

A study by Ziderman (2016) found out that majority of training systems in Sub-Sahara Africa have to deal with the reality of diminishing government funding. The study noted that funding of technical education is on ad hoc basis and there are variations noted every year. According to Ziderman (2016), this brings a lot of uncertainty and budgetary limitations. Technical institutions thus have limited budgets and thus are unable to employ, buy facilities and equipment, and update their programmes to meet the dynamic industry as well as meet the technological needs of the industry. The researcher notes that Kenya is a developing nation and as such the government funding as in any other countries probably has been on a decline and as such the training could have been on the decline.

Training is a strong determinant of achieving the objectives of a programme such as Technical Vocational Education and Training (TVET). This is so because the outcomes or products of that programme can be used to judge the effectiveness of such programme. However, from series of report from the labour market (such as the International Labour Organisation) on the status of TVET graduates in Africa, is that TVET graduates do not possess employable skills. This non-possession of employable skill is as a result of TVET delivery system in Africa; which is characterized by inadequate human and material resources amongst others. It is against these backdrops that this paper tends to address these inadequacies. Specifically, the training needs of personnel in TVET institutions in Africa will be the focus of this paper, which will help to tackle the problem of TVET graduates not possessing employable skills (Odu, 2011).

Ayonmike (2014) recommended that retraining remains a vital tool in the revitalization of TVET in Africa. In revitalizing TVET in Africa, greater consideration must be made in the development of personnel in TVET institutions. This can only be achieved through training and retraining programme. The following strategies for training and retraining of personnel in TVET institutions were recommended, which might help in producing competent TVET graduates in Africa (Ayonmike 2014). Africa (2015) described that projects envisaged results are to contribute to enhanced quality and relevance of TVET programs in line with the TVET Act of 2013 provisions and to support increased access (enrolment) in engineering and applied sciences TVET Programs to meet the immediate and emerging labour market demands.

Okello (2011) posited that in Uganda majority of the supervisors and middle level managers who are charged with induction of newly employed trainees indicated that the trainees from technical training institutions lacked in some aspects of the job market. He attributed this to lower technology of equipment that trainees were exposed to during their classroom practicals or poor training by the trainers. Kenya's unemployment is currently estimated at 40% of which 80% are youth. At the same time, Kenya lacks critical middle level skills in the immediate and emerging labour market to meet the demand side needs of the employment equation. TVET sector plays an important role in meeting the skills demands for the labour market. Kenya is experiencing a skewed skill mix particularly among university graduates, technicians and artisans. For example, the ratio of technicians and associate professionals to craft and related trades workers for machine operators and assemblers in the industry is 33:1:2

respectively. This skill gap therefore requires urgent actions in equipping post primary and secondary youths as well as out of school youth with middle level skills for the labour market (Africa, 2015).

A plethora of challenges have continued to impinge the teaching and learning in TVET institutions. Moreover, failure to remedy unsystematic implementation and allowing TVET policies and reforms to be driven by economic rationale have been identified to be perennial problems in TVET curriculum implementation (Lauglo and Maclean 2005). The high enrolment has been attributed to factors such as notions of access, flexibility in curriculum and teaching methodology, cost effectiveness, good student-teacher relationships and equal opportunity (Simiyu, 2009). The earlier studies do not however interrogate the influence of the teacher on TVET curriculum implementation. Moreover, even these studies on teachers' influence such as [Fietz, Reglin and Mouillour, 2007; Indoshi, Wagah and Agak, 2010; Sharma, 2008 and UNESCO, 2010 interrogated only a single aspect of teacher development (in-service training) thereby making unknown the influence of pre-service teacher qualifications.

Kamau (2013) noted that most technical institutions did not have pre-requisite training facilities. Majority of the institutions had run-down equipment, obsolete machines, demotivated staff and inadequate financing. The technical institutes did not have a staff promotion framework, did not provide for staff reward system among other human resource management issues. The institutes did not provide in-service training for their staff. The potential of TVET is also greatly limited by the low government investment towards this sector. As such, the technical institutions are least funded compared to other education sub-sectors such as primary, secondary or university. This leaves the technical institutions to seek alternative funding which is not guaranteed such as donor funding or even sponsorships.

Technical and Vocational Education and Training (TVET) is considered a critical component for producing middle level manpower that is needed to drive Kenya's economy towards the attainment of Vision 2030 (Education Sector Report, 2016). In its role of supporting the national development agenda, the TVET sector envisions providing skilled and globally competitive employable human resource with the right attitudes and values required for growth and prosperity of the various sectors of the economy (Republic of Kenya, 2005, 2012). This goal is anchored on 10 specific objectives of TVET, which emphasize the pivotal role TVET is envisaged to play in the social, economic and technological development of the country; laying a foundation for the vocational skills required for socio-economic development, to equipping students with entrepreneurial skills and positive attitudes for self or formal employment, and providing practical training that is responsive and relevant to the country's sustainable economic and industrial development (Maina, 2007; Ngware, Onsomu & Manda, 2005). However, discrepancies are evident in the implementation of the TVET policy. For instance, life skills education had not been implemented in most TVET institutions.

Moreover, the realization of the objectives is hampered by a fragmented TVET sector that is characterized by a mismatch of the curriculum content to the rapidly changing market needs and differing quality of training from one institution to another (Kigwilu, 2014; Republic of Kenya, 2016). This often results in high youth unemployment and the lack of qualified workers. Other factors aggravating the

mismatch include lack of practical training elements in TVET courses, low level of involvement of enterprises in TVET training, outdated equipment and infrastructure at training institutions, and lack of well-trained teachers (German Development Cooperation in Kenya, 2017).

In Kenya, there is low investment in technical courses such as engineering and electronics which is a setback to Kenya's economy (Herbling, 2012). These courses require large capital to establish and sustain the programme. Technology is one of the most dynamic aspects of education in the world. Castellano et al (2003) argue that due to changes in the technology in industries, scores of people were unemployed. They noted that technical institutions needed to align their programmes to meet the technological needs of the future so that they remain relevant. They noted that the current programmes were aligned on old technology and therefore produced trainees not well suited for the market. These graduates therefore needed further training in the industry which became expensive for majority of the firms. The study noted that young people from technical institutions were looking forward to well-paying jobs but they could not gain direct entry since the industry required them to have internal training which was offered at no salary for the period. This situation demoralized future trainees of TVET and majority developed a negative attitude towards TVET.

#### **Problem Statement**

Republic of Kenya (2004), Sessional Paper number 6, calls for the development of a National Skills Training Strategy and the establishment of the National TVET Authority. The objective of TVET is to provide and promote life-long education and training for self-reliance, which may be slowed down, owing to lack of capacities in TVET institutions to cater for graduates of primary and secondary education, wishing to undertake higher level TVET related courses. However, despite Government intervention through TVET programmes, the Ministry of Higher Education, Science and Technology (2009) noted that Kenya is lacking capacity that will be able to train TVET programmes and those currently training need to upgrade their skills to be relevant in line with the current technology. Without appropriately skilled employees, technical staff and management, will not be locally and internationally competitive, an aspect that has not been fully evaluated.

Technical training institutions, like any other TVET institutions, are faced with many challenges in their endeavor to train quality graduates (Werum, 2003). One of the uniqueness of this study is that the current TVET curriculum is more of euro-centric in the sense that it was adopted from the colonialists (Abebe, 2012). The stakeholders and the policy makers have not been able to modify it to suit the current Kenyan education system. The reviewed studies do not explicitly interrogate the determinants of effective implementation of the quality TVET programs and the challenges affecting the implementation process. Kamau (2013) noted that the current technical training curriculum is not well defined and lacking as well as being rigid in nature. As such, Kamau noted that it did not meet the technological changes and diverse needs of the industry. The study also noted that the quality of technical trainees has been on the decline due to poor instructional programmes among other challenges facing the interns in TVET institutions. The study singled out lack of practical experience as one of the key challenges.

#### **Literature review**

##### **Qualification of Technical teachers**

When considering growth in technology, the development of the human capital is paramount Fajonyomi, (2007). The issue of professionalism in teaching has been on course for quite some decades in Kenya. Various scholars have researched on the need for skilled teachers to effective learning. Fajonyomi (2007) emphasized that the success or failure of any educational programme rests mainly on adequate availability of qualified, professional, competent and dedicated teachers.

Bandele and Farem (2012) investigated the challenges facing the implementation of Technical College curriculum in South West, Nigeria. The study sought to determine whether the teachers and instructors were professionally qualified or not to teach Technical and Vocational Education in Technical Colleges. The study revealed that 65.83 % of the teachers and instructors were professionally qualified to teach in Technical Colleges. Despite this finding, the cited study did not examine whether the teachers' professional qualifications influenced the implementation of the curriculum in Technical Colleges in Nigeria.

On the contrary, an analysis of the qualifications of the teaching staff in a case study on private TVET in Zambia conducted by author in UNESCO (2015) found that private TVET institutions faced a shortage of qualified lecturers. The survey showed that out of 159 teaching staff, only 36 % had a teaching certificate. This implied that a large proportion of the teachers were not qualified to teach TVET courses thereby posing a major challenge to the effective implementation of the TVET curriculum in the country. In the Kenyan context, the author in Ferej, Kitainge and Ooko (2012) established that majority of the TVET teachers in Kenya possessed Diploma certificate and degree (37% and 33% respectively), about 20 % and 10 % held a certificate and a Master's degree respectively as their highest qualifications. This finding showed that TVET teachers had the requisite minimum qualifications to teach in TVET programs.

However, Farstad (2002) and Fietz, Reglin and Mouillour (2007) cited lack of qualified instructors as one of the constraints that prohibit the effective implementation of TVET in Kenya. This finding corroborates the findings of authors in Sharma (2008) that showed that TVET teachers are inadequately prepared to discharge the task of curriculum implementation. Similarly, the UNESCO National Education Sector Support Strategy (UNESS) for the Republic of Kenya 2010-2011 reiterates that the lack of adequately trained tutors to teach at the TVET institutions in Kenya impedes curriculum implementation (UNESCO 2010).

An analysis of the challenge facing the implementation of technical college curriculum in south west Nigeria found that 65.83% of the instructors were professionals qualified to teach in Technical College (Olatoye, 2011). The study sought to investigate whether or not the instructors and teachers were professionals qualified to TVET in Technical colleges. On the contrary, UNESCO (2003) showed that private TVET institutions faced a shortage of qualified lecturers in Zambia. Out of the 159-teaching staff survey, only 36% had a teaching certificate. In the Kenyan scenario, a similar research showed that 37% of the TVET teachers in Kenya possessed Diploma and 33% possessed degree, about 20% held a certificate and 10% had master's degree as their highest qualification. The findings established that TVET teachers and instructors had

the required minimum requirements to teach in TVET programs (UNESCO, 2003).

Similarly, other studies have established the existence of teacher qualification inadequacies in curriculum implementation in TVET institutions. For instance, Hooker, Mwiyeria, Waweru, Ocharo, Bassi, Palmer and Clark, (2011). conducted a baseline survey of the level of awareness and existing practices in the use of ICTs in TVET institutions in Kenya. The findings showed that limited ICT skills and literacy among lecturers (mentioned by 24% of HoDs) and insufficient ICT training opportunities (mentioned by 20% of the lecturers) were some of the major challenges in integrating ICTs to TVET course provision. The low proportions of HoDs and lecturers who mentioned the aforesaid challenges indicates that generally high qualifications existed among few of the ICT lectures in TVET institutions in Kenya.

#### Teaching experience of the TVET teachers

Out of the TVET teachers interviewed on the study conducted by Indoshi (2010), only 38% had acquired industrial work experience of only six months or less, 26% had work experience of between 12-36 months and 16% had work experience of over 36 months. Moreover, the finding of the study conducted by Werum, (2003), showed that two thirds (67%) of the TVET lecturers were more comfortable teaching theory than practical. He concluded that teaching experience enables trainees to gain hands-on experience. The lecturers' preference to teaching theoretical content and practical aspects of the curriculum will affect the achievement of quality TVET programs.

Teaching experience for majority of teachers has remained inadequate in TVET institutions in Kenya. Fereji et al (2012) established that the majority of the TVET teachers had inadequate work experience. The study examined the challenges of quality and relevance in TVET teacher education in Kenya and had 150 respondents from TVET institutions in different towns in Kenya with relatively high numbers of TVET institutions. The respondents included policy makers, TVET administrators, TVET teachers and TVET trainees. Out of the TVET teachers interviewed, 38 % had acquired industrial work experience of only six months or less, 26 % had work experience of between 12 - 36 months and 16 % had work experience of over 36 months. Adequate initial work experience and updating enables the TVET teachers to apply appropriate work context to her/his students.

#### Research Methodology

The study adopted descriptive survey research design because the study sought to obtain information that described the participants' views. 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 population of 10 principals, and 240 instructors. The principals and instructors were the primary respondents. Stratified random sampling was used to sample (TVETs) and simple random sampling was used to select 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. The Principals were purposely selected since they have core responsibility on TVETs management function. A sample size of 75 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 principals and instructors in Uasin Gishu County. The data from 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. 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.

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

After all data has 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 relationship between variables.

#### Findings

The researcher conducted correlation analysis in order to establish the relationship between variables. To achieve this Pearson's correlation product moment was carried out because all the variables were in interval scale. Pearson's product moment correlations were used to examine whether there exists a relationship between teacher factors and implementation of curriculum. Correlation coefficient showed the magnitude and direction of the relationship between the study variables and results presented in Table 1. Findings of the study showed that there was a significant influence of tutor qualification on implementation of curriculum ( $r=0.555$ ,  $p=0.00$ ). This implies that an increase in tutor qualification there was an improved implementation of curriculum in TVETs. There was a significant positive influence of tutor experience on implementation of curriculum in TVETs ( $r=0.445$ ,  $p=0.000$ ). Therefore, the more the tutor experience the higher the implementation of curriculum in TVETs.

**Table 1. Correlation Analysis.**

		Implementation of curriculum	Qualification	Experience
Implementation of curriculum	Pearson Correlation	1	.555**	.445**
	Sig. (2-tailed)		.000	.000
Qualification	Pearson Correlation	.555**	1	.349**
	Sig. (2-tailed)	.000		.005
Experience	Pearson Correlation	.445**	.349**	1
	Sig. (2-tailed)	.000	.005	

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

b. Listwise N=64

Findings of the study showed that tutor qualification influences the implementation of curriculum in TVETs. This finding corroborates previous studies (Ferej, Kitainge and Ooko, 2012 & Hooker, Mwiyeria, Waweru, Ocharo, Bassi, Palmer and Clark, (2011) that revealed that TVET teachers had the requisite minimum qualifications and were qualified to teach TVET courses. Findings of the study showed the tutor experience influence the implementation of curriculum in TVETs. This agrees with Indoshi (2010) and Werum, (2003), that teaching experience enables trainees to gain hands-on experience.

### **Conclusion and Recommendation**

The findings showed that teacher qualifications and teaching experience had a high influence on the implementation of Technical Curriculum. Thus, the study concluded that teacher qualifications, teaching experience influence the implementation of Technical Curriculum.

The TVET colleges should employ more qualified teachers in order to enhance teacher competence in order to spur and sustain students' interest in technical education. The management should build the capacity of teachers to ensure that community colleges have an experienced pool of teachers that can effectively implement the Technical Curriculum.

### **References**

Abebe. A. (2012). "Self-perception of teachers as adult learners and professionals: implications to their practices and professional development," *Ethiopian Journal of Quality and Relevant Higher Education and Training*, vol.1 (2), pp. 4-11, 2012.

Africa D. F. (2015). *Weaving Through Reforms: Nairobi's Small Garment Producers in a Liberalized Economy: Paper presented at the East African Workshop on Business Systems in Africa.*

Ayonmike, Chinyere, S., (2014) *Training the Trainers in Technical Vocational Education and Training Institutions in Africa: A Tool for Producing Competent Graduates.* Department of Technical and Business Education, Delta State.

Bandele O. S. and Farem. A. Y. (2012). "An investigation into the challenges facing the implementation of technical college curriculum in South West, Nigeria," *Journal of Education and Practice*, vol. 3 (12), pp. 14-20,

BMET (Bureau of Manpower, Employment and Training). (2014). *Skills standards of BMET.* Government of Bangladesh. Tech Report. Sep 2014, Dhaka: Government of Bangladesh.

Castellano, M., Stringfield, S., & Stone, J. R. (2003). *Secondary career and technical education and comprehensive school reform: Implications for research and practice.* *Review of Educational Research*, 73(2), 231-272.

Cooper, D. R., Schindler, P. S., & Sun, J. (2003). *Business research methods.*

Fajonyomi, A. A. (2007). *Reviving Higher Education Relevance in Nigeria.* A paper presented at the 3rd Faculty of Week and Annual National Conference, Faculty of Education. University of Maiduguri on the theme Higher education reforms in Nigeria from 26th to 27th September.

Farstad. H. (2002). *Integrated Entrepreneurship Education in Botswana, Uganda, and Kenya: Final Report.* Oslo: National Institute of Technology , pp. 40-48.

Ferej, A., Kitainge. K & Ooko, Z. (2012). *Reform of TVET teacher education in Kenya: Overcoming the challenges of quality and relevance.* Triennale on Education and Training in Africa, Burkina Faso: Association for the Development of Education in Africa (ADEA).

Ferej, K. Kitainge and Z. Ooko. (2012). "Reform of TVET teacher education in Kenya: Overcoming the challenges of quality and relevance," *Triennale on Education and Training in Africa, Burkina Faso: Association for the Development of Education in Africa (ADEA)*, pp. 12-17. ˆ

Fietz, G. Reglin T. and Mouillour. I. (2007). *Study on the Implementation and Development of an ECVET System for Initial Vocational Education and Training.* Germany: European Commission, , pp. 164-165.

*German Development Cooperation in Kenya (2017). Promotion of youth employment and TVET.* Nairobi: Embassy of the Federal Republic of Germany

*Government of Kenya (2004). Kenya Vision 2030.* Government Printers. Kenya.

Herbling, D. (2012). *Middle level colleges set for fresh audit.* Nairobi: Daily Nation.

Hooker, M. Mwiyeria, E. Waweru, S. Ocharo, M. Bassi, R. Palmer L. and Clark, D. (2011). "TIVET ICT baseline survey report 2011. TIVET institutions, Kenya," Internet: [www.scholar.lib.vt.edu.ezproxy.waikato.ac.nz/ejournals/JTE/v15n1/pdf](http://www.scholar.lib.vt.edu.ezproxy.waikato.ac.nz/ejournals/JTE/v15n1/pdf), 2011

Indoshi, F. C. Wagah M. O. and Agak. J. O. (2010). "Factors that determine students' and teachers' attitudes towards Art and Design curriculum," *International Journal of Vocational and Technical Education*, 2 (1), pp. 9-17

Indoshi, F. W. (2010). *Factors that determine students and teachers attitudes towards Art and Design curriculum.* *International Journal of Vocational and Technical Education*, 9-17.

Kamau, S. M. (2013). *Challenges Affecting the Technical and Vocational Education Training Youth Polytechnics in Kiambu County.* *International Journal of Social Sciences and Entrepreneurship*, 1 (5), 679-687

Kigwilu, P. C. (2014). *Determinants of effective implementation of Artisan and Craft curriculum in Catholic sponsored community colleges in Nairobi region, Kenya.* (Doctoral dissertation, The Catholic University of Eastern Africa, Nairobi, Kenya). Retrieved from

<http://erepo.usiu.ac.ke/bitstream/handle/11732/2820/DOCTORAL%20DISSERTATION-PETER%20CHANGILWA%20KIGWILU.%202014.pdf>.

Kothari, C. R., (2000): "Research Methodology". *Methods and Techniques*; New Age International.

Lauglo, J. (2005). *Research for TVET Policy Development.* International Center for Technical and Vocational education training: Magdeburg

Maina, R. K. (2007). *Determinants of entrepreneurial intentions among Kenyan college graduates.* Nairobi: KCA University.

Mugenda, O. M. & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative Approaches.* Nairobi: African Centre for Technology Studies.

Ngerechi, J. B. (2003). *Technical and Vocational Education and Training in Kenya.* A Paper presented at the Conference on the Reform of Technical and Vocational Education and Training in Gaborone, Botswana.

Nguku Everlyne (2012). *Analysis of textile & clothing training institutions in the east-southern Africa.* Commercial Insects Programme ICIPE. Kenya.

Ngware, W. M. Onsomu, N. E. and Manda K. D. (2005) *Private sector investment in education and training: A Case of tertiary education in Kenya (Special Report No. 7).* Nairobi: Kenya Institute for Public Policy Research and Analysis,

- Nyerere, J. (2000), Technical & Vocational Education And Training (Tvet) Sector Mapping In Kenya . The Dutch TVET Programme, Schokland.
- Odu, O.K. (2011). Philosophical and sociological overview of vocational and technical education in Nigeria. *American-Eurasian Journal of Scientific research*. 6(1). Pp.52-57
- Okello, B. (2011). The Factors Influencing the Negative Attitude Towards Technical Vocational Education and Training in the Post-Colonial Uganda. Unpublished Doctorate Thesis. Kenyatta University.
- Olatoye, R. A. (2011). Effects of co-operative and individualization teaching methods on senior secondary school students achievement in organic chemistry in Ogun State, Nigeria. *The Pacific Journal of Science and Technology*, 310-319.
- Onyesom, M.,(2013). Towards quality assurance in business education in Nageria:constraints and control. *Asian Journal of Business Management*, 5(30).
- Orodho. J. A. (2002). *Techniques of Writing Research Proposals and Reports in Education and Social Sciences*. Nairobi: Masola Publishers , pp. 18-40.
- Republic of Kenya (2005). Report on the rapid appraisal on the status of TVET in Kenya. Nairobi: MOEST.
- Republic of Kenya (2012). Ministry of education and ministry of higher education, science technology, sessional paper no 14 of 2012. Nairobi: Government Printers.
- Republic of Kenya (2016). 2017/18-2019/20 Education Sector Report. Nairobi: Government Printers.
- Sessional Paper Number 1 (2005). On Policy Framework for Education Training and Research: Government Printers, Nairobi.
- Sharma. A. (2008). *Technical Vocational Education and Training: The Master Key. The Review of the Functions of FIT, TPAF and other TVET Providers*. Fiji: Ministry of Education, Youth and Sports, Arts, Culture & National Heritage, pp.17-22.
- Simiyu, J. W. (2009). Factors influencing the attractiveness of a Technical and Vocational Education and Training Institution: A case study of a Technical Institute in Kenya. Nairobi: Moi University
- UNESCO (2010). National Education Sector Support Strategy (UNESS) for the Republic of Kenya 2010-2011. Nairobi: UNESCO, , pp. 16-21.
- UNESCO (2015). Synthesis of main findings from two case studies carried out in Ghana and Zambia on private technical and vocational education and training (TVET). Paris: International Institute for Educational Planning. Available: [http://www.worldbank.org/.../0,,content MDK: 20295530~page PK:210058~piPK, 2003 \[5 Feb. 5, 2015\]](http://www.worldbank.org/.../0,,content MDK: 20295530~page PK:210058~piPK, 2003 [5 Feb. 5, 2015]).
- UNESCO. (2002). Technical and Vocational Education and training for the 21st century:UNESCO and ILO recommendations. UNESCO.
- UNESCO. (2003). Synthesis of main findings from two case studies carried out in Ghan and Zambia on private TVET. PARIS: International institute for educational planning.
- UNESCO. (2010). Reaching the marginalized: EFA global monitoring report 2010. paris and london: UNESCO and Oxford University press.
- Werum, R. (2003). Trinidad and Tobago's post-secondary education system: Bottlenecks in technical training programs. Washington, DC: Inter-American Development Bank.
- Ziderman, A. (2016). *Funding Mechanisms for Financing Vocational Training: An Analytical Framework*. Institute for the Study of Labor, GENEVA. ILO.