COLLEGE OF EDUCATION
SCHOOL OF EDUCATION

CHALLENGES FACING TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING INSTITUTIONS ON YOUTH EMPLOYMENT IN RWANDA:

A case of study of Gasabo District

By
HAKIZAYEZU Jean de Dieu
Reg no: 220017828

Thesis submitted in partial fulfillment of the requirements for the award of a master's degree in Educational Leadership and Management.

Supervisor**: Dr. Jean Francois MANIRAHO**

August 2022

DECLARATION

To the best of my knowledge I, Jean de Dieu HAKIZAYEZU, hereby declare that the work presented in this thesis is titled "Influence of Technical and Vocational Education and Training on youth employment in Rwanda: a case study of Gasabo District" is my work and it has never been presented in any institution of higher learning for any academic reward or qualification.

Student Name: **Jean de Dieu HAKIZAYEZU**

Signature:

Date 08/08/2022

SUPERVISOR'S APPROVAL

I, **Dr. Jean Francois MANIRAHO**, acknowledge that this work has been done under my supervision and hereby submitted upon my approval.

Supervisor's Name: **Dr. Jean Francois MANIRAHO**

Signature:

Date: 08/08/2022

DEDICATION

I have a warm appreciation for my family, all my friends, and well-wishers who in one way or the other made me work in proper condition during the tense moments of this research.

To you, my precious offer from God, who graced my life, my victory, and all my esteem, and my life.

To the colleagues and staff who in one way or another contribute to this achievement, who never said no to my request;

To my dear wife who never stopped directing, inspiring, and supporting me throughout my whole process of studying. May Lord protect her and offers her blessings.

To my adorable supervisor Dr. Jean Francois MANIRAHO for his right support, encouragement, and directing throughout this study.

May the God who never fails reward you all accordingly!

ACKNOWLEDGEMENTS

I owe my deepest very grateful to the Almighty God for what has become of me through my studies. I extend my special appreciation to my Supervisor Senior Lecture **Dr. Jean Francois MANIRAHO** for his generous heart and enthusiasm in guiding me throughout my research.

My deepest thanks to my respondents for accepting and providing me with the primary data needed for this study.

ABSTRACT

The research titled Influence of Technical and Vocational Education and Training on Youth Employment in Rwanda was conducted to investigate the challenges faced by TVET Institutions in the provision of competencies and practical skills at the labor market in Rwanda, and to identify strategies opted by TVET Institutions to overcome these challenges faced by TVET graduates at the labor market. The population of the study was 150 graduates, 20 trainers, and 12 employers from Gasabo district. TVET schools and companies were selected using purposive sampling while TVET graduates, TVET trainers and employers were selected using simple sampling methods.

The total sample size is one hundred ninety-two (192) respondents. Questionnaires and guided interviews were used for data collection. Tables, pie charts, and graphs were used for data presentation and analyzed using mixed methods. Quantitative data collected were analyzed using descriptive statistics while Qualitative data were analyzed using content analysis.

From collected data, findings were made showing challenges faced by TVET graduates in labor markets and which linked to inadequate competencies and technical skills which are the basic requirements of employers. For TVET to make more influence on youth employment, promotion of youth employment, skills development & training, regular monitoring of TVET schools, private sector involvement in the education sector, and provision of enough training facilities were mentioned as strategies to overcome challenges faced by TVET trainees at the school level and at workplace.

Furthermore, from the findings of this research, the study recommends to Rwandan Education stakeholders to set out a Dual TVET Training policy from level one to five, provide to TVET private schools training facilities as they accommodate a high number of trainees than public schools, and to expand training to all trainers on CBT/CBA.

Key words: TVET, Technical skills, Youth, employment, unemployment, competencies

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

CBA: Competence-Based Assessment

CBC: Competence-Based Curriculum

CBT: Competence-Based Training

ESSP: Education Sector Strategic Plan

IAP: Industrial Attachment Program

ICT: Information Communication and Technology

MINEDUC: Ministry of Education

NESA: National Education School Inspection Authority

NGO: Non-Government Organization

NISR: National Institute of Statistics of Rwanda

RDB: Rwanda Development Board

REB: Rwanda Basic Education Board

RP: Rwanda Polytechnic

RTB: Rwanda TVET Board

TVET: Technical and Vocational Education and Training

UR: University of Rwanda

WDA: Workforce Development Authority

CHAPTER ONE: INTRODUCTION

1.0. General Introduction

This chapter highlights a basic introduction of the TVET. The first section of the chapter clarifies the background information related to the problem of the study. The statement of problem, research objectives, and research questions are also outlined. Other sections of the study include respectively significant and limitations of the study, significance and scope of the study.

1.1. Background of the study

Education plays an international role in the development of the countries' economy and investment in human capital. It also develops knowledge and skills which lead to the generation of income and productivity. Technical and Vocational Education and Training (TVET) is the most weapon used by many countries to equip younger people ready for employment.

Technical and Vocational Education and Training (TVET) in the sub-sector of the Education system is widely recognized as the engine of economic and technological growth and a range of learning experiences that are relevant to the world of work(Okwelle et al., 2014).

Union (2007) said that TVET institutions find solutions which respond to training needs offered to trainees from different socio-economic and academic backgrounds and prepare them to get gainful employment and sustainable livelihoods. According to the statistics from ILO's Global Employment Trends for Youth (2015) the youth unemployment rate counted at 13.1% worldwide. According to Eichorst et al (2012), young graduates from TVET have more chance to get jobs and earn more than graduates from General secondary education graduates in developing countries, they added that highly skilled people at work are likely more paid.

African countries have invested more in education enrolment which leads to rapid participation of young children in primary, general secondary and TVET

with no consideration of training facilities which affects learning process. Youth employment in African countries is a major challenge due to schooling achievement and low skills which affect youth graduates' performance at the labour market and employment. The World Bank showed that more than ten million young Africans, who live with low skills, drop school to look for a less paid job in their communities. We cannot forget that youth unemployment can cause many problems related to mental health problems, national insecurity and social integration.

The Regional workshop on TVET systems for youth employability in Africa (2019), showed that African continent is challenged by youth unemployment where 20% of its population is young people of 15- 24 years old and among them 41% are unemployed. Due to low skills, 70% of youth who have jobs are employed in vulnerable conditions where any time can lose a job. The unemployment in the working-age population will continue to increase with an estimated 450 million by 2035 in Africa. According to Africa competitiveness report made by the World Bank and the Global competitiveness in 2017-2018, if there are no new jobs created, only 100 million people of working age will be employed (Klaus S., 2017).

In Rwanda youth are people with the age of 14 – 35 inclusive and it was at 40% of the total population in 2014 (NISR, 2014). However, concerning the working-age, NISR counted the population with the age between 16-35 as a youth at working age and this makes only 35% of Rwandan population which defines youth employment population. Among the youth between 14 and 35 years of age, 65% are underemployed. Most of the youth people do not have enough skills to meet the labour market's needs. In this context, the Government of Rwanda (GoR) through the National Transformation Strategy, has made strategies to strengthen the Education sector. Education Sector Strategic Plan (ESSP) has made emphasis on TVET by increasing the number of enrolments, providing

consumables and increasing number of public TVET schools. Thus, enrolment will comply with the policy like National Employment Policy (NEP), TVET policy to remove the observed skills gap in the labour market and to increase youth employment and competitiveness at the workplace.

TVET as an important skill-oriented education with the prospect of stimulating employability and national development (Hassan et al, 2017) should facilitate in empowering youth with employable skills. From data of TVET management information System of 2019 (Rukundo & Sikubwabo, 2021), Rwanda counted more than 360 TVET schools with 102.485 students. Therefore, according to Norcini, J.& Burch, V., 2007), learning should be the key purpose of assessment at the labour market and provides to individuals employment-related skills by adopting competency-based approaches to instruction and workplace learning that enable trainees to handle employment, adjust to changing jobs and career contexts.

The Ministry of Education's mission is to transform Rwandan citizens into skilled human capital for the socio-economic development of the country by ensuring equitable access to quality education, focusing on combating illiteracy, promotion of science and technology, critical thinking, and positive values. To achieve this mission, by 2024, 60% of upper secondary school trainees, will be enrolled in TVET schools for decent job creation and poverty reduction purpose (MINEDUC, 2021). According to National Employment Policy (MIFOTRA,2014), in seeking to address the level of employment, TVET systems have focused on increasing the employability of graduates and enhancing their capacity to function effectively within existing labour markets and to adjust to other labour market constraints. This has meant enhanced coordination among government departments responsible for TVET and employment policies. It has also created the need for TVET systems to develop mechanisms that identify skills needs early on and make better use of labour market information for

matching skills demands and supply.

According to Rukundo & Sikubwabo, (2021), Rwanda like other African countries made great effort by introducing new policies and strategies for the improvement of quality and relevance in TVET for the purpose of reducing unemployment among the Youth. The implementation of these strategies and TVET policy encountered some challenges. From July 2016 final report made on self-evaluation regarding poverty reduction strategy paper II, revealed that every year around 170,000 youths start working with no needed qualification and skills needed and this led to limited integration into economic cycle (Rukundo, 2021) . Also, from the report of National Employment Policy (MIFOTRA 2014), around 70% of job seekers, do not have required qualification and skills to perform job. Therefore, the current TVET policy implementation, does not respond to the issue of youth employment as some students are concentrated on the same trades with very limited workplace and others are unemployed or underemployed due to lack of employable technical skills.

From the research conducted in Nyabihu district in 2017 by Desire, showed a shortage of technicians in mining, tourism, ICT, food processing, tea and handcraft (Rukundo ,2021) which indicated that TVET institutions at secondary level do not train skilled technicians with reference to labour market needs.

From the research made by Rwanda NGOs (MIFOTRA, 2015), showed three critical issues on labour market supply exist namely low levels of educational attainment in the labour force, a low number of people with needed technical skills, and poor linkage between learnt skills from technical training institutions with market needs.

Youth graduates are also claiming to have less or not internship or apprenticeship (MIFOTRA, 2015) and it influences unemployment of youth graduated from TVET institutions. This research investigated the reasons of unemployment of youth graduates from TVET institution from Foundation Level to level five, investigate the challenges faced by TVET graduates on labour market and their

impact on Youth employment and suggested strategies to overcome these challenges. This research also suggested further research on transition from TVET secondary to tertiary Education.

1.2. Statement of the research problem

Employment and being productive at workplace are serious challenges faced by Rwandan youth and employers. According to Mantar, 60% of African youth are unemployed and the situation continues due to demographic change and lack of employable skills (Mantar, 2013). TVET is very important, especially in African countries to equip the young generation with the technical skills needed in the labour market. These skills facilitate in reducing unemployment and increasing productivity rate for youth as individuals and for the economic development of a nation.

Rwanda has tried to improve the quality of human beings by investing more in education. New policies including the TVET Policy 2008 and 2015, were established to deal with social and economic issues. Through the Ministry of Education (MINEDUC), Workforce Development Authority (WDA) was established in 2009 with the mandate of promoting, facilitating, and guiding the development and upgrading of skills and competencies of the national workforce, to enhance competitiveness and employability through the TVET system. Later in 2017 Rwanda Polytechnic High Learning Institution was established to enhance practical skills and equip students with employable skills needed for job creation and competition in the labour market. TVET policies were made, and the current was made in 2015 to fasten the acquisition of competency-based employable skills that help to train the skilled and entrepreneurial workforce that Rwanda needs to respond to the labour market needs. The students enrolled in TVET are young people aged from 15 years old and after graduation, they should possess employable skills that help them to be employed and or self-employed. The number of graduates should contribute more to the economic development of the country.

However, a Labour force survey conducted in February 2019, showed 19.3% of youth unemployment rate and it was above the national unemployment rate of 14.5%. The survey showed most of the youth who did not possess the required competencies to perform available works or create new jobs whereas it is the main objective of TVET. This survey found also that TVET graduates lacked practical skills to perform or create jobs and could not communicate effectively with employers (NISR, 2021). The labour force survey conducted in 2020, showed the unemployment rate for TVET graduates was 15.4% in 2019 and the youth unemployment rate was 19.4 in 2019 and 22.4% in 2020. Only 59.6% of TVET graduates were employed in 2019.TVET graduates did not have the prerequisites skills needed at the workplace and they couldn't have a chance to benefit from even a very minimum opportunities job for a TVET graduate (NISR, 2021).

In 2009, MIFOTRA made a National Skills Audit and found in general that, there is a 60% shortage of skilled technicians in Rwanda. In 2012, a similar survey was conducted by RDB sector of manufacturing, ICT, mining, energy, construction, tourism, agriculture, finance, and insurance. The audit found out the shortage of soft skills like business creation, communication, leadership, human resource management, languages, and innovation and recommendation was to strengthen and make reform of technical training. This research investigated other employable technical skills and competencies required by employers which are supposed to be taught at school level (MIFOTRA, 2014).

The current TVET policy do not show the relationship between trades offered in Rwanda and skills gap at labour market. The relationship should help in admission of students based on offered trades and job opportunities by avoiding a big number of graduates in the same trades with limited job opportunities. TVET policy should show the effectiveness of industrial attachment program to students in relation to youth employment. From the report made by JICA in 2021 on the

challenges faced by TVET schools, especially private schools, there are shortage of equipment and infrastructures like standardized workshops, tools, equipment materials, consumables, and lack of textbooks in all levels of TVET schools both public and private. This affected acquisition of technical skills which should help TVET graduates in their employment. (JICA, 2021).

According to Rwanda Private Sector Development Strategy (MINECOFIN, 2013), some employers claimed about educated workforce with low skills as a main constraint to productivity which had doubled since 2006 and requested TVET institutions to fast-truck urgent measures of intervention which should help youth to get employable skills required for economic development. TVET policies in place, should set alternative strategies that attract a big number of enrolments in TVET by equipping students with practical skills relevant to the labour market and link them with available opportunities.

The study investigated the challenges faced by TVET schools in equipping their trainees with the required competence and practical skills at labour market and provided to TVET institutions their capabilities to innovate TVET system in relation to their graduates' employment. Finally, the study provided recommendations for further research. The contribution of this research helped in finding out necessary strategies to put in place by TVET institutions which should facilitate TVET graduates' employment in the labour market.

1.3. Research objective

The objective of this study was to investigate the challenges faced by TVET schools in equipping their trainees with the required competencies and practical skills at labour market and provided to TVET institutions their capabilities to innovate TVET system in relation to their graduates' employment, and if there if influence of TVET on youth employment.

1.4. Specific objectives

a) To investigate the challenges faced by TVET Institutions in provision of required competencies and practical skills at labour market in Rwanda.

b) To identify strategies opted by TVET Institutions to overcome these challenges faced by TVET graduates at the labour market.

1.5. Research questions

a) What are the challenges faced by TVET institutions and which affect students' required competencies and practical skills at labour market in Rwanda?
b) What are the strategies to be taken by TVET Institutions' Leaders to overcome these challenges?

1.6. Significance of the study

The researcher provided to policy maker and TVET Institutions' Leaders the materials to be used while taking decisions in TVET reforms. The study showed challenges faced by TVET graduates at employment, roles of trainers, TVET leaders and private sector to increases youth employment, and strategies to be taken to enhance youth employment. The community benefited from this study by employing competent graduates from TVET institutions equipped with practical skills and able to compete at labour market by increasing economic productivity. This research also showed where further research will be made in relation to contribution of TVET on youth employment.

1.7. Scope of the study

The domain of this study was conducted based on the contribution of TVET on youth employment in Rwanda. Specifically, the research emphasized on how TVET graduates are absorbed in the labour market refer to the skills acquired at school level. The study was conducted in Gasabo district as one of three districts of Kigali City with a high Youth unemployment rate.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This chapter focused on literature related to the impact of TVET on Youth employment. The literature is organized in such a way it provides the importance of TVET in the development of a country, quality of training in TVET institutions and youth employment in relation to trainees' competencies and acquired skills from TVET Institutions. This chapter possesses the concepts, background of TVET in Rwanda, TVET and youth employment, youth unemployment in Rwanda, challenges faced by youth in employment and the strategies to overcome the challenges faced by youth to get employment. The chapter ended with a conceptual framework.

2.2. Definition

a) Youth

The United Nations (UN) defined Youth as the people aged between 15 and 24 years (UN, 2004). In Africa, it comes somehow different where African Youth Charter defined Youth as anyone with the age between 15 and 35 years (Ismail & Mujuru, 2020). The National Institute of Statistics of Rwanda (NISR) defines youth as any person aged between 14 to 35, inclusive and this differs from ILO definition of youth where it defines it as a person aged between 15 and 24 inclusive (NISR, 2021).

b) Technical and Vocational Education and Training

UNESCO defined TVET as an educational process apart from generalization, training that focuses on technologies and related sciences, that involves in addition to general education, the acquisition of technologies, practical skills, attitudes, and knowledge about occupations in various aspects of economic life. (ILO, 2020).

c) Employment

Harvey D. (2005) defined employment as the propensity of learning institution's

graduates to get a job and hope to make a career development.

d) **Competency**

It is defined as the individual's ability to use, apply, and demonstrate a group of related awareness, knowledge, skills, and attitudes in order to perform tasks and duties successfully and which can be measured against well-accepted standards (levels) required in employment as well as assessed against provided evidence at work location.

e) Industrial Attachment Program (IAP)

Industrial Attachment program is a school coordinated- experience that places trainees in real workplace environment whereby trainees develop, and practice career related knowledge and skills needed for a specific job level. Industrial attachment program provides to trainees' hands- on experience in a particular industry or occupation related to trainees' career interests, aims, and abilities and help them to put into practice what trainees learned already from school.

2.3. Theoretical review

Human capital theory

The human capital theory was used in this research and had been developed since Mincer (1958, 1962, Schultz (1960, 1961), Becker (1962) and Ben-Porath (1967) settled their foundations. Education is considered as consumption and at the same time investment. TVET was from that conception seen as an investment that involves cost and benefit. The assessment can be made by using financial criteria like present value and internal rate of return. Primarily, Janice, T. (2013) analyzed the effect made on wage level to two types of human capital (general and specific) working in the competitive labour market that have no other related problems. He found that one of the two types of human capital can be moved to other institutions and motivates employees to use the cost and get all the benefits of training. In the opposite of the first human capital, the second is more specific to the company and cannot be transferred to the other institutions (Becker G. S.,1975).

Garcia, J.H. (2005), showed that organizations would have increased productivity as they hired employees and provided them with specific skills through training. A Kenya Apurva Sanghi (2016) was leading economist at the World Bank, said that apart from a government that should support the private sector in economic growth and job creation, the government in collaboration with private sector should also intervene in human capital development to increase national productivity. This requires the government to invest more in improving quality education leading to innovation and creativity.

2.4. Empirical Review

According to the research conducted in Kenya by Ndile L.M.,(2018) related to the Influence of Competency Based Educational Training (CBET) on youth employability with a sample population of 229 composed by TVET trainers, trainees and employers where questionnaires and guided interview were used to collect data, found that 65% of the CBET graduates found employment or were self-employed during the first 3 months after graduation, 20% had employment after 3 to 6 months of graduation, 10% within 1 year, and 5% got employment after 1 year.

On the other hand, graduates who did not follow CBET, 20% of them, took less than 3 months to get employment or to be self- employed, 17% took 3-6 months, 38% got it within 1 year while around 25% of them took more than a year to be employed or self-employed.

According to the research made in Ghana by Ines and Ouandji (2014) with sample population of 30 TVET graduates, 71 youth and one TVET school, using questionnaires and interview found that 30% of TVET graduates showed shortage of skills acquired from school and this affected their job employment (Ines & Ouandji, 2014) . The research recommended TVET institutions to strengthen Industrial Attachment Program, school inspection and provision of enough training materials, tools and equipment which would help in the achievement of school-based training.

Research lead by Laura Hammond in Uganda and Ethiopia in 2019 on The Impact of Youth Training and Employment on Migration Dynamics in the Horn of Africa, using a sample population of two schools, found that 30% of TVET graduates were unemployed or returned to job they were doing before joining TVET institutions. However, the research found from respondents that more young people preferred to join TVET rather than university as they thought to acquire more employable skills. The research recommended TVET institutions to focus more on the quality and quantity of job required skills and take care on the profiles of the job market which absorb their graduates (Laura H.,2019).

From the report of Labour Force Survey on youth unemployment in Rwanda between 2016 and 2019 showed that in 2016 youth unemployed rate was 1.86%, in 2017 was 1.77%, in 2018 was 1.7% and in 2019 was 1.66% (NISR, 2021).

Labor Force Survey added also TVET graduates in 2017, 2018 and 2019 were employed as follows:54.2% in 2017, 58% in 2018, and 59.6% in 2019. This number was high when compared to the employment rate in general education where the percentage of employment in 2017 was 42.4%, 43.95 in 2018 and 2019 was 43%. However, we still have a high number of 40% of TVET graduates who are in unemployment condition (NISR, 2021).

Even if there is relative contribution of TVET on youth employment, Labor Force Survey Annual report made in 2020 also showed that the youth unemployment rate in Rwanda was at highest level of 22.4 % while comparing to adult population which was at the rate of 14.1 %. The survey showed that unemployment rate among TVET graduates in 2017 was 18.7%, 17.4% in 2018 and 15.4% in 2019, and during Covid-19 pandemic, the survey indicated an increment of youth unemployment rate from 17.0% in February 2021 to 23.5% in May 2021 (NISR, 2021).

From the report made in 2020 by World Bank on youth unemployment in Rwanda between 2016 and 2019, showed that in 2016 youth unemployed rate was 1.86%, in 2017 was 1.77%, in 2018 was 1.7% and in 2019 was 1.66%. The report

highlighted some causes of Youth unemployment such as lack of skills and knowledge acquired at school, poor attitudes towards work especially agriculture, and rapid change in technology which did not match with TVET programs implemented at school level (World Bank, 2020).

However, the most challenges faced by TVET institutions are TVET curriculum and structure which are not linked with labor market needs and the quality of training. These challenges lead to TVET graduates with no skills required at labor market and by return lead to high unemployment rate among TVET young graduates (Ndile, 2018).

From research made in Nyabihu district by Rukundo and Sikubwabo in 2021, the results showed there was a great contribution of technical skills acquired by trainees from TVET schools, (Rukundo & Sikubwabo, 2021). Again, research made in Rwamagana district at Kwigira Vocational Training Center in Kigabiro Sector by Isaboke in 2019, with a sample population of 80 TVET graduates, and 19 trainers found, there was a positive correlation between acquired TVET skills and youth employment (Isaboke,2021). However, all done research, found a gap on matching skills acquired from TEVT institutions with labour market needs which lead to youth unemployment.

Self-evaluation final report made in July 2016, on the Poverty Reduction Strategy Paper (PRSP) II, showed that about 170,000 young people start jobs each year with no sufficient needed qualifications at the labour market and then do not have a chance to easily contribute to economic growth.

The competitiveness report made in 2019 scored quality of Vocational Training at 50.4% (Klaus S., 2019) and Government of Rwanda through Economic Transformation, aimed to improve sustainable economy by creating more than 200 000 off farm jobs each year between 2001 and 2012. Employment growth considered to be at 3.7% between the year 2011 and 2014 but till 2014, the sector

of agriculture remained the largest employer where working people in the sector occupied 67.6%.

Hirshleifer et al. (2016) made research in Turkey and found that the positive impact of TVET was observed only when training is responding to labor market needs. However, there were very important issues to be addressed namely (i) Graduates' Level of education at the labor market, which was very low, (ii) Low Number of competent graduates at the labor market and (iii) a low correlation between technical skills acquired from training institutions and labor market skills needs. The company on their side should ensure whether they are ready to employ all youth graduates from TVET institutions with better jobs. According to Tripney and Hombrados (2013), TVET should intervene in improvement of employment opportunities for youth in low and middle-income countries.

2.5. TVET practical skills and youth employment

The study made in South Africa, Botswana, Namibie and Tanzanie, showed quality of Education provided to TVET trainees and their preparation to labour market employment very poor. More African countries have made effort in increasing enrollment and on students' academic performance instead of improving the quality of required practical skills at labour market (Oppenheimer & spicer, 2011).

TVET students spend a lot of their time learning theory rather than practical activities related to occupational requirements. The way also curriculum is designed does not facilitate the trainees to match acquired technical skills with job market and thereafter, TVET institutions with such curriculum produce graduates with no transferable skills to both employment or self-employment.

2.6. Competences needed at labor market and Youth employment

TVET is an education system that helps young people to get courses and training related to employability with the main goal of leaving secondary education to young trainees with employment (social objective) and providing to labor market

with competent graduates (economic objective).

Technical skills relevant to the labor market are missing among TVET graduates in Rwanda and this affects their employment. TVET approach of teaching (Competence Based Training) should make more emphases on linking school-based training with workplace requirements. Certification should be based on acquired technical skills with reference to employability options and it should start from the development of curriculum which should be flexible to adjust emerging technological skills with work requirements (Reitz, 2018). Competency is the ability of an individual to use and apply technical and behavioral skills for a given task and duties. This is observed after assessing the accomplishment of required employment standards at work location.

2.7. Relationship between education, skills development, and labor market needs

Access to education is one of the pillars of Education Sector Strategic Plan (2019-2024) and investing in Education sector continues to be among the priority of Government of Rwanda in order to improve Rwandan welfare through better job and changing the world of work. Access to secondary education with emphasis on TVET is one way to ensure that the youth receive a gateway to high-paying non-farm wage employment, and it is one of economic transformation's objective to create more than 200 000 new off-farm jobs each year as stipulated in National Strategy for Transformation (NST1). The Government of Rwanda, in 2017 established the Rwanda Polytechnic High Learning (RP) for a mandate of strengthening skills development and employability challenges which faced especially by women and youth (MINEDUC, 2018).

Reforms made in TVET should transform the existing skills development structures into dynamic system based on demand in the labor market, increased accessibility to youth, integrating the necessary skills, knowledge, and attitudes within the workforce. However, the remaining challenges are at which level TVET integrates employers and different companies into the education sector planning, development and training structures in order to find the response of the

system through changing demand conditions and ensuring that skills development programs focus on practical and employable skills required by employers?

To make sure that there is linkage between education, skills development and labor market needs, TVET policy makers should take different measures to promote employment as highlighted in Revised National Employment Policy (MIFOTRA, 2019) by strengthening the institutional frameworks for development of skills and employability; enhancing quality of TVET to be responsive to current and future needs of labor market through emphasis on practical skills rather than +theory; improving hands-on skills among youth outside regular education system and employment; enhancing demand driven employability skills for productive job creation and private sector satisfaction, and ensuring human resource development and planning. This activity should facilitate to address the needs of the labor market, supportive of recent developments and making the room for future changes. Developed countries like Chine and Japan, used TVET to capacitate youth with technical skills and thus increased their productivity and economic growth and TVET is considered in these countries as Skills development (UNESCO-UNIVOC, 2019).

2.8. Participation of Private sector in skills development

Involvement of private sector in TVET is essential and their role in skills development and young employment should not be ignored. The role of Private Sector is not only related to provision of training but also in policy formulation, setting educational priorities, provision of labor market demand, designing curricula, quality skills standards and indicators, training design and courses, industrial attachment and employment provision, strategies for implementation of TVET policy, joint school management and finally in certification. This partnership can be summarized in four areas namely governance, financing, training delivery and certification (Maurer et al., 2015).

2.9. Technical and Vocation Education and Training (TVET)

From the existence of earth, human beings developed practical skills which helped to survive, in living and security. Rwanda before colonization like other African countries initiated practical skills known today as trades and craft and training was offered in Amatorero. Rwandans especially young boys and girls were trained in military skills, called Itorero for young boys, foundry, ironsmith, making the basket, and poverty for girls. During that period education was informal whereas during and after colonization, the education system became formal even if informal education continued because formal education was not accessible to every citizen.

For 21 century, new skills were provided to the young generation and focused more on science development and after led to industrialization for many countries. Providing Technical skills was not the main priority of colonialists in Rwanda, and it was waiting for independence to have the first TVET school named ETO Muhima (Ecole Technique Officielle) opened in Kigali and was owned by Catholic church. The training period was 4 to 6 years and graduates were awarded A3 and A2 certificates respectively. The number of technical schools increased from1962.

In the year before 1979, there were Ecole Famiale targeted to train female primary graduates. The training period was two years and on the other hand, boys were trained in CERAR (Centre d'Enseignement Rural et Artisanale). From 1980 to 1994, there had been a reform and Ministry in charge of Education changed Ecole Famiale and CERAR into CERAI (Centre d'Enseignement Rural Artisanal Intégré) and management of CERAI was done by districts (Communes) and religious institutions. Graduates from CERAI contributed more to the country development especially in the construction and education sector. However, the number of these schools were not enough to provide needed workforce with required skills at labour market.

After colonization till 1994, there were only four technical schools known as ETO (ETO Kicukiro, ETO Kibuye, ETO Kibungo, and ETO Gatumba) and were under supervision of the Ministry in charge of Education where graduates were awarded A3 or A2 certificates.

From 1994 to 2009, the number of technical schools increased and new ETO like ETO Nyamata, ETO Gitarama and CFJ (Centre de Formation des Jeunes) under the management of the Ministry of Youth, Sports, Culture and Vocational Training, were transformed. Several Technical Schools were created along the time, but it was in 2008 that the first TVET Policy was established, and this policy gave clear guidance on management and vision of Technical Schools. The expansion of TVET schools was one of the strategies for Poverty reduction and youth employment.

In 2009, WDA was established for the mandate to regulate and monitor the implementation of the TVET Policy in Rwanda. WDA had to match skills acquired at school with skills needed at the labour market because for the last 10 years, TVET in Rwanda was considered as Education for workers.

In 2018, Rwanda has counted more than 360 TVET schools with 102,485 trainees. Rwanda to achieve the nation's Vision 2030 goals and sustainable educational development goals, has made more investment in improving quality and access to education. But unemployment rate continues to increase among youth people at the age of 16 to 35 years old.

In National Strategy for Transformation 2017- 2024, the Government of Rwanda planned to enroll 60% of students in TVET institutions of all upper secondary education students. The outcome of this target was to increase the number of TVET graduates equipped with practical skills able to create new jobs and participate in poverty reduction of the country. The key role of TVET in the 2030 Agenda for Sustainable Development as agreed at the United Nations Sustainable Development Summit (UNESCO, 2020) is the promotion of sustained and inclusive economic growth, social development, environmental protection for the benefit of all and the eradication of poverty and hunger.

2.10. The Education System in Rwanda

Education system in Rwanda starts from pre- primary (3 years), primary education (6 years), secondary Education (6 years where the first 3 years are for ordinary level and the next 3 years students follows either general education or TVET), High education (between 2 and 4 years) and Postgraduate (between 2 and 4 years). Many reforms were made like Competence Based curriculum to increase the quality of training and some efforts to increase access, quality, equity and relevance in all levels of education in Rwanda. TVET and High education sub sector were given the mandate to increase at the same time access and quality by making focus on the skills needed at labor market (MINEDUC, 2018).

Ministry of Education to achieve its mission, works closer with the semi – Autonomous Agencies namely REB, NESA, RTB, RP, HEC, UR and CNRU. Rwanda TVET Board (RTB) has particularly mandate of coordinating all programs, activities and projects that can accelerate the development of TVET in Rwanda. RTB should ensure the programs offered from Level one to level five in TVET, help to move towards demand- driven, oriented to labor markets, and with graduates equipped with skills needed in the world of work.

2.11. Role of Government in financing TVET institutions

The government of Rwanda has the role of setting education policy, strategies of implementation and monitoring the implementation of curriculum at national and central level. Recruitment of high qualified and motivated trainers, provision of teaching materials, tools, equipment, and consumables on other side are very important in education system to increase the quality of education (MINEDUC, 2018). In Rwanda some schools especially private, do not have sufficient tools, equipment, materials, and consumables to use during training process which affects trainees' performance both at school and at labor market.

2.12. Youth employment

NISR reported 40% of the Rwandan population to be young. However, when considering work aged population, NISR counted individuals aged between 16 to

35 and this corresponds to 35 % of Rwanda population. Therefore, youth employment-population refers to an employed person with the age between 16 to 35 inclusive (NISR, 2016).

Employability is explained as a chance that an individual has to get an internal or external job in the labor market. It is problematic for graduates who have not acquired the necessary skills to perform offered tasks or prepared to compete at market demand (Rwfo, 2014). Among offered TVET programs which help its graduates to get job and to expose them to the world of work, there is Industrial Attachment Program (IAP) and it is mandatory to all TVET students.

The main challenges faced by African countries is the high increase of school access and education completion with the high cost and this leads to a shortfall of quality of skills needed at workplace. TVET graduates should acquire at school and in company employable skills include basic and higher-order cognitive skills, behavioral and socioemotional skills, technical or vocational skills, and business skills.

The most important emphasis of Ministry of Education is to identify and orient social, emotional and behavioral skills which contribute to high production of the company, and MINEDUC should install specific programs which equip youth with employable competencies.

Rwanda's youth employment strategy is almost entirely focused on skills and entrepreneurship development. The identification of the need to integrate education and training into youth employment promotion, has served to focus attention on the farmer. Little emphasis has been placed on promoting macro-economic and/or sectoral strategies to create wage employment opportunities for young people. Most of the provisions for youth employment are concerned with increasing the quantity and quality of education and training to match the perceived needs of the labor market. This is also reflected in the Private Sector Development and Youth Employment Strategy 2018 – 2024.

To have sustainable economic growth, there should be the creation of many off-farm jobs. From 2018 to 2024 the government of Rwanda's target was the creation of 200 000 off-farm jobs. The employment growth was 3.7% between 2011 and 2014 however, agriculture was the first employer with 67.6 % of working people in 2014 including youth people.

From the economic brief report in Rwanda, job creation was not adequate to meet the annual demand requested by the labor market. In 2015 for example 5,555,268 people were employed whereas 1,186,677 people were not employed or self-employed. The difference was analyzed as to be generated from lacking employable skills (Rwanda Economic Snapshot H2, 2017).

2.13. Unemployment status in Rwanda

Unemployment is the best way to understand the status of labor market and it occurs when an active people is willing to work but do not get paid job. According to NISR (2021), youth unemployment refers to the share of the labor force aged between 15-24 years old without work but available for and seeking employment. According to UNFPA report (2017), among the factors which contribute to unemployment is inadequate and poorly human capital.

Three main unemployment types of unemployment were identified namely cyclical, structural, and frictional unemployment. TVET graduates in unemployment status, are mainly linked with structural unemployment where skills acquired at school are not matched with skills needed at labor market or new technological skills needed (Bank of Australia, 2022).

2.14. Impact of TVET on youth employment

Some countries have taken the initiative to improve technological, industrial, and economic growth for poverty reduction and increasing employment, especially of youth by equipping them with employable skills (Akpomi, 2009). TVET is then a good engine to increase employability and well-paid employment for youth people. Eichorstet al. (2012) agreed that even if the cost of education in TVET is very high in relation to general education, the earning is also very high compared

to general education. Tripney and Hombrados (2013) conducted a comparative quantitative analysis related to the impact of TVET on employment and realized that there was high probability of TVET graduates finding employment in the formal sector than their colleagues graduated from general education.

According to Olaitan, (1996) TVET is an education that provides people with competencies which are responsive to social needs and is quick solution to the youth employment crisis. However, if education programmes force some youth to learn TVET for the only purpose of employment and displace others, TVET institutions can have normally negative impacts and can create frustration to beneficiaries (Fox, L., 2017). TVET is oriented to the world of work and its aim is to overcome skills gap issues that have been observed in the transition from education to real work for youth.

In Nigeria, vocational training has shown greater importance in improving youth employment and creating employment opportunities in public services. TVET helps to improve the well-being of the youth population and their communities, increase productivity and capacitate individuals to be self-reliant through being self-employed and creating new job opportunities
for others (Rukundo & Sikubwabo, 2021).

Abbas et al.(2014) said that TVET is an education process that followed general education with technical training which directs a person to the world of work and leads to the sustainable development of the country .Abbas et al.(2014) used the data of Labor Force Survey published by the Federal Bureau of Statistics in Pakistan related to the importance of TVET in economic development and concluded that technical skills are needed tools to improve labor mobility, adaptability and productivity and facilitate competition of workforce and by avoiding imbalance at the workplace. The main challenge is how can TVET institutions link technical skills provided to young students with skills needed at labour market.

Oosterom (2018) outlined the main objective of the TVET as to train an individual for preparing him or her to earn living, to serve society and to promote productivity. A labour market survey conducted every year by Vocational Education and Training Authority (VETA) in Tanzania, found that skills acquired by TVET graduates helped two-thirds of them to gain employment especially in agriculture, food processing, construction, and tailoring (Abbas et al.2014). Therefore, the way TVET is implemented do not convey to satisfaction of youth employment and it is not only in Rwanda but also in other developed countries, so Rwanda uses TVET as one of strategies to strengthen youth employment and for poverty reduction (MINEDUC, 2016).

2.15. Factors affecting Youth employment

2.15.1. Mode of curriculum offered in TVET Schools

Rwanda TVET schools use Competence Based Curriculum (CBC) which is designed to help trainees to demonstrate what they can perform and able to compete at labour market. It is implemented in the form of competence-based Training (CBT) and assessed in Competence Based Assessment (CBA) approaches.

a) Competence Based Training (CBT)

TVET in Rwanda has adopted a Competence Based Training approach that has been launched countrywide in 2017. Competence Based Training has a process of assessing trainees' competences in the form of Competence Based Assessment (CBA). The assessment of CBT is an approach to TVET that places emphasis on what a person can perform in the workplace because of completing a program of training.

CBT uses a TVET curriculum which follows a modular design and CBT programs are often comprised of modules broken into segments called learning outcomes, which are based on standards set by industry, and is using concrete skills than abstract learning**.** Trainees work on one competency at a time, which is likely a small component of a larger learning goal.

b) Competency-Based Assessment (CBA)

Assessment is the process of collecting information as evidence to be used in making judgments about trainees' learning or for taking decision whether competence has been achieved. This process helped to take decision on what a trainee has learned and what he/she is able to do when being employed or self-employed.

It is also a process of assessing the competence of trainee using the standards for skills and knowledge needed at the workplace and provided in a Competency Based Training curriculum (also called training standards). A trainee is evaluated on the individual competency and can only move on to other competencies after he/she has performed the current skill being learned.

The competency affects both individual's job responsibility and performance on the job and usually falls into two categories, namely technical and behavioral.A Competency Based TVET System, generally uses combinations of techniques to ensure that the needs of different Industry sectors are addressed (demand), courses or competency-based training programs are developed, competency-based assessments / verifications are conducted, and employees / apprentices / trainees / students are efficiently trained and competent.

During CBA, assessor works with trainees to collect evidence of competence using the benchmarks provided by the unit standards that comprises the national qualification. Being competent means that the individual has suitable or sufficient knowledge, skill, experience and attitude in according with specification of industry. A trainee will be judged being competent if she/he gets at least 70% in the given class assignment and more than 95% in integrated situation. TVET institutions in Rwanda should apply CBT/CBA not only for training but also by linking applied competence to labor market need. This linkage will facilitate TVET graduates for employment.

2.15.2. Industrial Attachment Program

The main role of TVET is provision of technical skills needed at labour market. However, private sector always claims of shortage of labour force with practical skills required to perform a given task. To have a better inclusive education system with high performance, is a best tool to develop a well and strong labour force supply ((Dondofema et al., 2020).

Dondofema et al., (2020) indicated that the French government, pledged to further develop attachment as a path to success at school and to employment. He added, the Government of French in identification of the importance of IAP, found that there was more benefit to trainees who did IAP to be employed than trainees who did not. From the research made by French in 2005, 80% of young students who did IAP, have been employed and secured at work.

However, from the done research, the IAP is fruitful when it takes between 6 months to 4 years. This explains why some countries like German, use TVET Dual Training for increasing the time spent by trainees in companies. Depending on the trades pursued by trainees, they spent between two or three days per week in the company and remaining days, at TVET school. It equipped them with technical skills required at labor market.

Government of Rwanda through Ministry of Education initiated Industrial Attachment Program (IAP) to be conducted in all TVET schools from Level one to Level five to easy and expose trainees on workplace. Each year a TVET trainee is required to attend the IAP and it is organized to take 300 teaching hours (30 credit) and it is a compulsory to all TVET trainees with the purpose of work exposure.However, in Rwanda this program is challenged with high number of trainees in TVET seeking IAP places with limited Companies, low level companies' trainers in training methodology, shortage of tools, equipment, and materials in companies to cover all training courses/ modules learned at school, short period of IAP, and low participation of Private sector in provision of IAP to TVET trainees.

2.15.3. Advantages from Industrial Attachment Program

2.15.3.1. Advantages to Trainees

According to Edziwa and Chivheya (2015), IAP helps trainees to put in place knowledge and skills acquired at school, being exposed to the real world of work and helped them to show a positive attitude toward the work at the rate of 70%. During IAP, some companies tend to retain competent trainees when finished IAP.

The activity of IAP starts by contacting different companies and followed with appointing trainees to different companies and when returning, they share experiences with colleagues, which increase they motivation to the world of work. From the view of Trainees, in IAP they gain communication skills, learn how to manage time, flexibility, accountability, task management, cooperation, and connectivity with senior workers. IAP period is also time of job guidance for trainees.

Provision of enough period of IAP to trainees, helps them to link the acquired skills and knowledge of their respective trades to world of work, exposes them to current technological methods and materials, allow them to update their skills and knowledge in their respective trades, and gives them a guanine and holistic impression of their training trades (Rwfo, 2014).

2.15.3.2. Advantage to TVET institution

Training institutions always need to improve their training methods, to make innovation in curriculum, to use modern training equipment that are used in real world of work. During IAP, trainers are required to supervise trainees and get feedback from both companies and students. According to Skills for Productive Employment (2016), 70% of training Institutions whose trainees attended IAP, have reviewed training curriculum with reference to the companies needs and 80% of their graduates have been absorbed by labor market. This collaboration creates a linkage between industry which absorbs graduates and TVET institutions. IAP is marketing tool for TVET institutions and the more their trainees perform well in IAP, the more school is recognized and more its

reputation increases (Andoh et al. ,2016).

2.15.3.3. Advantages to host companies

Companies which host trainees during IAP, their waste bill is reduced between 10 and 15% , this cost gained is used for other needs of the company. During IAP, host companies identify the potential of employees to be employed in future among accommodated trainees which reduces time and cost wasted during recruitment process. It has been observed that trainees in IAP have more new technological skills which they share with companies' employees, and it constitutes capacity building of host company staff and thereafter increases companies' productivity after closing of IAP (Edziwa & Chivheya,2015).

2.16. Challenges of youth employment

2.16.1. Labour demand and supply mismatch

Most challenges faced by youth employment includes both supply (mismatch between skills and employability) and demand (limited job development and expansion), current labor market measures that impact the quality of labor market supply and demand which are very important for an employment plan to be made by policymakers.

There is a very big problem between skills gained by TVET graduates and skills needed in the labor market. This mismatch hurts youth employment where many young graduates from TVET schools cannot be absorbed by the market in need. The countries' economy is also moving to a more skill-intensive competencies position even if its youth are lacking these skills of a modern economy which they ought to get from training institutions (NPC, 2011).

According to Hausmann (2008), the primary cause for the country's people unemployment including youth, is a structured mismatch between the skills needed by the modern economy and the skills supplied. In our days, Rwanda is investing more in TVET where students are supposed to be graduated with technical skills needed at the labor market. However, the existing mismatch between these skills and labor market demand creates massive youth unemployment and employers claim, employing workers with low skills which

creates a high investment on the cost of new employee capacity development ((Bank of Australia, 2011).

2.16.2. The low labor absorption capacity of the market need

Number of graduates from both general education, TVET and High learning institutions in this decade has increased faster than it has ever happened before in comparison to the economy's absorption capacity. Economic growth requires skilled people with technological and innovative skills. The world of industrialization uses more technology in economic growth and tend to use technology and robotics instead of human being. A human being is highly needed in technological services. The utilization of technology reduces the number of workforce while supply is high. Lack of skills of the workforce is the most cited explanation of unemployment among the youth graduates and sometimes this shortage of Skills is attributed to educational disparities (Dias & Posel, 2007).

2.16.3. High-skill technology labour market

Today many countries are moving from labor intensive to capital intensive production processes at the same time to the service sector which leads to a low number of employment opportunities, especially for unskilled people. The countries are not now dependent on a high number of employees but are highly depending on high skill technology which contributes more to economic growth but excludes many youth people, especially those with low skills (NIST, 2020).

In Rwanda, some schools have no access to technological tools, to quick internet connection others do not have electricity. TVET schools are affected by the shortage of technological tools, equipment, materials, and consumables. Teaching facilities are very expensive, and affect quality of delivery. These issues contribute more to skills acquired at school and hurt TVET graduates' employment.

2.16.4. Poor economic growth

In many countries, the increase in unemployment has been related to economic growth since 1999 and has given a call for unemployment growth among policymakers and the association of labour. On the other hand, the economy was

developed slowly in comparison to employment over the years (NPC, 2012). There was no sustainable development of Gross Domestic Product (GDP) in such a way it reduces unemployment and affects highly youth than other people.

2.16.5. Poor support or facilitation of new entry into the job market

TVET graduates especially low skilled, are coming from poor families, some dropped out from primary or lower secondary education and others entered TVET as a second chance to be employed. Their parents cannot support them for job creation and sometimes not even ready to finance their studies. Some strategies should be put in place to facilitate the education of this category of youth. While adopting the first National Employment Policy in 2007, Rwanda youth employment was given a priority, and this was conducted to the adoption in 2015 of the National Youth Policy. Strong measures should be taken to support young graduates to create their own business and ensure its sustainability.

2.16.6. Knowledge and skills gap

According to ILO (2013), youth at workplace are challenged by skills mismatch especially in Africa. Normally, graduates from TVET institutions should be equipped with employable skills required by potential employers. However, mismatch between acquired skills from training program and required skills at workplace produce imbalances between demand and supply. TVET graduates are required additional technical skills to perform any given task at workplace and this creates unemployment to some graduates.

From the report of UNESCO- UNEVOC (2013), countrywide, youth claim of lacking jobs and others are underemployed. Among other challenges faced by youth in the world of work includes the mismatch of acquired skills at school with the labour market and lack of job opportunities related to their qualification. Some highlighted to acquire few practical skills in comparison with the world of work. The main skills mismatch from school to work transition are lack of skills needed at the labor market, lack of information about the job, and lack of required experience. To minimize the mismatch between TVET skills and employment,

TVET institutions should work hand in hand not only with the private sector but also with parents, youth groups, and community groups.

Poor skills and skills mismatch are major barriers to quality employment. Youth with low skills encounters a very high risk of lacking a job and if get opportunities to be employed, they are less paid or tend to lose job any time due to inefficiency. A good foundation for youth employment is quality education which equips students with skills related to better labor market outcomes and demand of employers.

2.17. Strategies to enhance youth employment

2.17.1. Promotion of youth employment

According to The National Skills Development and Employment Promotion Strategy 2019 – 2024, the youth should be equipped with marketable skills and have access to quality employment. The Rwanda National Skills Development and Employment Promotion Strategy have three pillars namely skills development, employment promotion, and job matching and for each pillar there are well-structured programs with well-defined interventions. The pillar one targets TVET and high learning to provide education relevant to the labor market at national and international levels. Pillar two focuses on the creation of employment.

By analyzing the existing business, policymakers should provide advice and inform employment the impact of existing business and suggested policies. The analysis should end with making improvements on the existing employment and creating a new job by social needs. With context, training centers should adapt this pillar and make a curriculum that responds to the employment needs. Pillar three aims at analysis activities, providing career guidance and employment services including support for graduates to easily start the work and respond to the labor needs.

Rwanda National Employment program (2014-2018) had four pillars namely skills development, entrepreneurship & business development, labor market

interventions & coordination, and monitoring & evaluation of national employment interventions. According to this National Employment Program, Pillars one and two provided quantified results where for example under Pillar one 23,500 youths and women were trained for increasing their employability through short term training, rapid response training (RRT), industrial-based training and internships.

This training aimed to equip youth people with skills needed at the labor market and most of the time training was conducted in companies. However, according to the report of Rwanda: Youth Labour Markets and the School-to-Work (2020), training period was short (between four to six months) to provide to youth needed skills to easy them to get well-specified employment and this led to only 93% of graduates in this program to get an unspecified job. According to (NISR,2016), the percentage of youth employment decreases with time. For example, it was at 79.1% in 2013/2014 and become 77.2% in 2016/2017 due to shortage of employable skills.

2.17.2. Skills development and training

TVET contributes significantly to the promotion of young people and society at large. Employers on their side may contribute to youth employment by confirming what young people learned at school are really what is needed in the labor market. This collaboration will help the graduates from TVET Schools to compete at National and international labor markets and increase their employability. Competent graduates are most likely to be hired and be stable at work. They easily cope with the change and make significant progress at the workplace. This required quality education and training offered at all levels of education.

TVET institutions together with Employers should support new youth employment by offering apprenticeship and internship programs to ease them to the world of work and develop acquired skills as one barrier required as

experience. Ministry of Education should invest more in career guidance from primary to lower secondary. It may be done by organizing one career guidance day at the school level, providing full occupation's specific information to students at school before being graduated.

2.17.3. Self-employment and entrepreneurship

Self-employment and creating own business are one of the strategies to solve youth employment challenges but young people encounter the problem of having less start-up capital, lack of entrepreneurship skills, experience, and knowledge.

However, on average young people find it more difficult than adults to engage in business because they have less capital in the form of skills, knowledge and experience, collaterals and less access to business networks. Ideally, youth people should be facilitated in their entrepreneurship development by setting measures which help them to start their own business.

The support may be, reinforce entrepreneurship education, facilitate administrative and regulatory framework, provision of business assistance and support, and tools kits for self-employment. Schools should organize sessions to be delivered by young entrepreneurs and share experiences with students to motivate them and to answer some of their constraints.

This study hopes to contribute the following findings that would improve youth employment:

Addressing skills gap related to TVET curriculum delivery, monitoring and evaluation of educational policy, and approaches to evaluation of CBT/CBA.

2.18. Knowledge gap

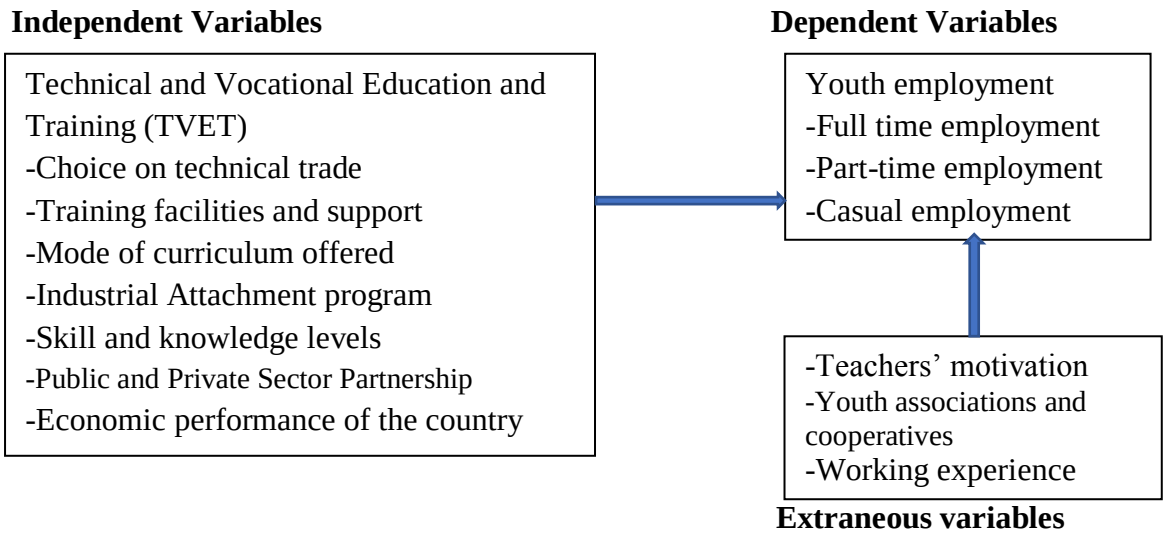
Research made referring to youth employment, unemployment, contribution of TVET on youth employment are not new, however, addressing challenge of youth employment in developing country like Rwanda is urgently. The system of teaching in TVET schools of Rwanda is designed to be more practice than theory, this teaching methodology, requires schools to more equipped with tools,

materials, equipment and consumables. Shortage of these teaching aids limited trainees to be exposed to the labor market. Graduates from TVET schools have difficulties in getting and securing jobs. Schools are underequipped and under resourced. There is shortage of training materials, tools, equipment, consumables, training companies, very limited IAP period in TVET schools, limited number of trainers trained in CBT/CBA,

Therefore, this study hopes to contribute the following findings that will contribute to the overall body of knowledge by: Addressing knowledge gaps related to TVET schools' training facilities, trainees 'employable and technical skills. Monitoring and evaluating curriculum and other educational programs. Carrying out research to provide solutions that help TVET school to equip trainees with employable skills. The study findings will be also used by education policy makers who may monitor TVET schools, provide to TVET schools consumables and start Dual training in all TVET schools.

2.19. Conceptual framework

A conceptual framework is a brief description that explains the main research to be made, factors and relationship between variables. Mutai (2000) said that a conceptual framework provides various variables and detects their correlation. The study will make a focus on TVET elements that contribute to youth employment.



Students at school acquire and accumulate new skills, knowledge and attitudes which help them to get employment after graduation. Type of employment obtained (Full-time, part-time, or casual employment) depend on skills, knowledge, attitude, level of education and specialization (trade pursued).

Graduates with high level of education have more chance to get employment than graduates with low level of education and this goes hand in hand with working experience where employees improved their working experience through professional capacity building, coaching, and mentoring. A good TVET school make emphasis on trainers/ teachers' motivation by creating good working environment, implementing, and monitoring of internship and IAP to help students to be familiar with real world of work. Equipping school's workshop with enough training tools, materials, equipment and consumables depending on the trades offered, help implementation of competence Based curriculum (CBC) at school level. It facilitates also students to acquire skills and knowledge for their employment after graduation.

2.20. Summary

Literature review found out the importance of Technical and Vocational Education and Training on youth employment and the society at large. The role of TVET in empowering youth with technical skills, knowledge, and attitudes for their employment at the workplace. Investing in TVET would be one of the human capital needs and cooperation with all stakeholders to find solutions encountered by the youth at labor market would be among solutions on Rwanda youth employment.

CHAPTER 3: RESEARCH METHODOLOGY

3.0.Introduction

The main purpose of this study was to investigate the challenges faced by TVET schools in equipping their trainees with required competencies and practical skills at labor market and provide to TVET institutions their capabilities to innovate TVET system in relation to their graduates' employment. The selection of respondents was based on the availability and characteristics of respondents. The selected trainers, TVET graduates, and employers were asked to show their understanding on the impact of TVET on youth employment in Rwanda. The chapter described the methodology to be used by the researcher while collecting and analyzing data.

3.1.Research design

In this study, a descriptive survey design was used to collect data related to the target population (Okwelle et al., 2014). To choose a descriptive survey design, researcher based on ideas of Kothari, (1985) for survey related to recording, describing, analyzing, and reporting situations that happens or happened. Survey method is mainly used to get data useful information in evaluating current practices and in getting basis for decisions. The descriptive survey research design helped the researcher to collect, analyze and provide a report data on challenges faced by TVET graduates on employment and the various strategies to be used by TVET leaders in in teaching and learning so that graduates would be highly equipped with employable skills. From collected data, a researcher concluded the influence of TVET on youth employment in Rwanda at the time of the study.

3.2. Target population

Schindler and Cooper (2003) described the target population as the total number of elements from which researcher generalize a conclusion. The target population in this research was TVET Youth graduates, trainers, and employers in the Gasabo district. Gasabo district has all characteristics needed in this research like

TVET Schools offering training from foundational level to Level five (L1- L5) and good absorption industry for TVET graduates (Hotels, Agakiriro and different companies).

According to National Institute of Statistics of Rwanda (NISR, 2018), Kigali City was among the province with highest Youth at 36.5% and Gasabo district was the first district with high number of Youth (36.8% of 898,764 Total youth in Kigali). Statistics also showed that Kigali City was the first among provinces with 4% of youth who attended TVET schools. According to the National Institute of Statistics of Rwanda (2020), from the did Labor Force Survey, Gasabo district was among six districts in Rwanda with high unemployment rate of 18.4% and the first in Kigali city.

3.3.Sample size and procedures

The sample size of this research was divided in three categories namely TVET Graduates, Trainers, and employers. The research involved 192 respondents which were selected using purposive and simple random sampling to select 150 TVET graduates, 30 Trainers, and 12 employers. Purposive sampling was used to select 5 TVET schools, 2 hotels, 4 companies from Agakiriro ka Kisozi and employers of these companies and Hotels. The reason to use these methods was to reduce the cost and some challenges that might happen during sampling process whereas the researcher knows the group which should provide relevant information. The researcher also used simple random sampling to give equal chance TVET graduates and Trainers and while selecting schools, graduates, and trainers for investigation. The findings were generalized countrywide.

3.4.Data collection methods

Data collection used both Primary and secondary data. Data collected from Administered questionnaires and structured interviews was used to collect primary data from TVET graduates, trainers, and employers. Secondary data was collected from reading documents from sources. Two methods namely Quantitative and qualitative methods were used.

3.5. Data collection instruments

Information from different respondents were collected using questionnaires and structured interviews and this helped to get more significant information in a short period of time from different respondents. Questionnaires were made based on research questions and objectives and were used to collect data from TVET graduates while guided interview was used to collect data from TVET trainers and employers. Questionnaires gave room to respondents to express their understanding or options on the needed information and provide suggestions.

3.6. Procedures of data collection

To collect information, the researcher had authorization from the University of Rwanda College of Education and Gasabo district to collect data from schools and employers. After receiving permission to collect data, a researcher contacted respondents for visits and meetings where necessary and explained the purpose of the research and their contributions.

3.7. Validity of instrument

Validity is the extent to which a research tool measures the objectives of the study as intended by the researcher, it means to measure what it was intended to measure (Rwamu, 2019). To make sure the validity of the instrument, a pilot study was used on a small number of people to assess strength and weakness in the research design. Thereafter, the result helped a researcher to adjust and measure the exact time needed to answer the set questionnaires. Validity is the extent to which the accuracy and significance of inferences are founded on the investigator's results. It means that the results founded from the analysis of obtained data, really represented the phenomena under investigation (Rwamu, 2019).

3.8. Reliability of instrument

Reliability is the extent to which an instrument produces similar findings when used in a similar study context. Reliability was tested by using 10% of the proposed sample population and the sprit half method were used as internal consistency (Rwamu, 2019). A high correlation of the two parts indicated the

reliability of the used instrument. One pilot school in Kamonyi district was used to test reliability of the instrument of data collection and to avoid ambiguous in questionnaires and interview.

3.9. Data analysis

Descriptive statistics such as frequencies, mean and percentages were used to analyze the quantitative data while content analysis was used to analyze qualitative data made through interview. Data analysis showed the challenges faced by TVET graduates at the labor market to get a job and factors influencing their employment. Data were interpreted and reported as summary in the form of graphics, tables, pie charts, texts and were reported.

3.10. Ethical considerations

In this research, ethical consideration took a critical part. A researcher was responsible for the confidentiality of any information given by respondents and assured them that provided information will be used for only research purposes. The questionnaires were made in such a way they did not indicate the name of the respondent. The research was inclusive to all categories of people with no extermination. However, it did not focus on youth people under 18 years old.

The methodology was too basic. A strong methodology was needed on the research design and a more detailed explanation was needed on the two methodological approaches a researcher chose for the study. The researcher has provided a rationale as to why he wanted to ask youth graduates, and how the selected sample population would help to answer research questions. Details are missing about: how negotiated access; how he conducted the interviews; and justification for using questionnaires.

CHAPTER 4: PRESENTATION OF FINDINGS AND DISCUSSION

4.0.Introduction

This chapter gives a detailed presentation and interpretation of findings based on the study objectives namely to investigate the challenges faced by TVET Institutions in provision of required competencies and practical skills at labour market in Rwanda and to identify strategies opted by TVET Institutions to overcome these challenges faced by TVET graduates at the labour market. The data collected answered research questions namely what are the challenges faced by TVET institutions and which affect students' required competencies and practical skills at labour market in Rwanda? And what are the strategies to be taken by TVET Institutions' leaders to overcome these challenges? Collected data were analyzed according to these two objectives of the study using both quantitative and qualitative methods and statistical tools.

4.1.Demographic data of respondents

A total number of one hundred ninety-two (192) respondents including 150 TVET graduates, 20 trainers and 12 employers were selected for the study. During this study, a researcher considered age, sex, trade followed by TVET graduates and absorption period to get employment. For employers, a researcher was interested in the domain of specialization of the company and experience in the domain of investigation.

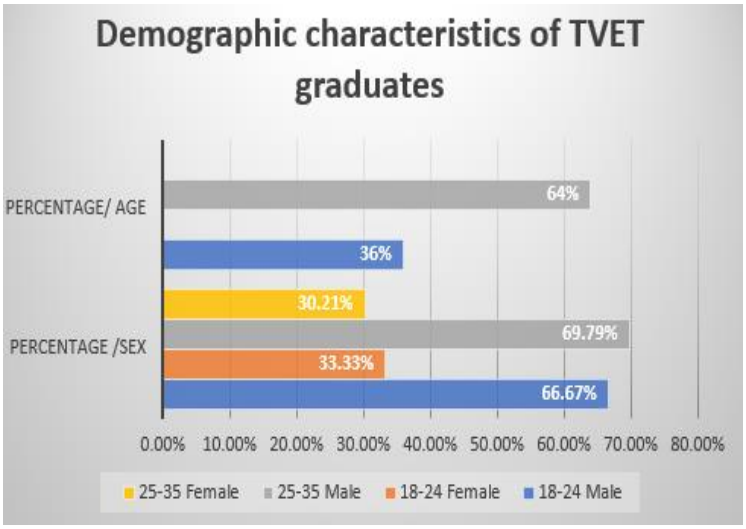
4.1.1. Characteristics of TVET Graduates

Table 1:Characteristics of TVET graduates per age and sex

TVET graduates per age and sex					
Age	**sex**	**Frequency per sex**	**Percentage per sex**	**Frequency per age**	**Percentage per age**
18-24	**Male**	**36**	**66.67**	**54**	**36%**
	Female	**18**	**33.33**		
25-35	**Male**	**67**	**69.79**	**96**	**64%**
	Female	**29**	**30.21**		

From findings, 36% were youth aged between 18-24 years old while 64% were youth aged between 25-35 years old.

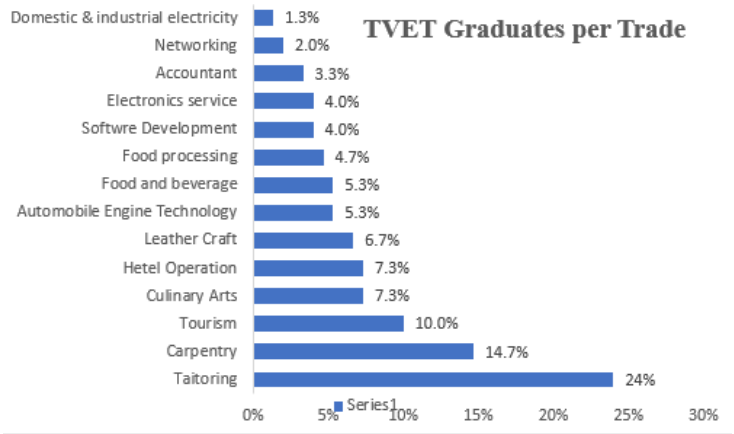
Figure 1: Characteristics of TVET graduates per age distribution and sex



Source: Field data

Findings from Table 1 and Figure 1; showed 36% rated youth aged between 18-24 years old, while 64% rated between 25-35 years old. Among respondents aged between 18-24, 33.33% were female while 66.67% were males and among respondents aged between 25-35, 69.69% were males while 20.21% were females.

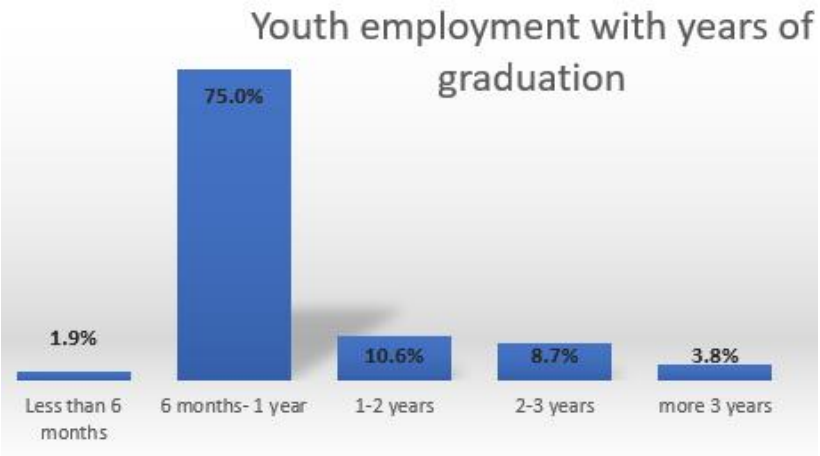
Figure 2: Characteristics of TVET graduates per trade



Source: Primary data

Looking into trades pursued by our respondents, findings showed a high number (24%) were enrolled in tailoring, 14.7% in carpentry, 10% in tourism, 7.3% in hotel operation, 6.7% in Leather craft, 5.3% in food and beverage, 5.3% in automobile engine technology,4.7% in food processing, 4.0% in Software development, 4% in electronic services, 3.3% in accounting and high less number was observed, 2% in Networking and1.3% in domestic & industrial electricity.

Figure 3:Showing characteristics of TVET graduates per year of graduation



Source: Primary data

The findings of the study showed 75% of the respondents took between 6 months to get employment, 10.6% between 1-2 years, 8.7% between 2-3 years. Less number is observed for graduates who got employment in the period less than 6 months rated at 1.9% while 3.8% rated for more than 3 years to get employment.

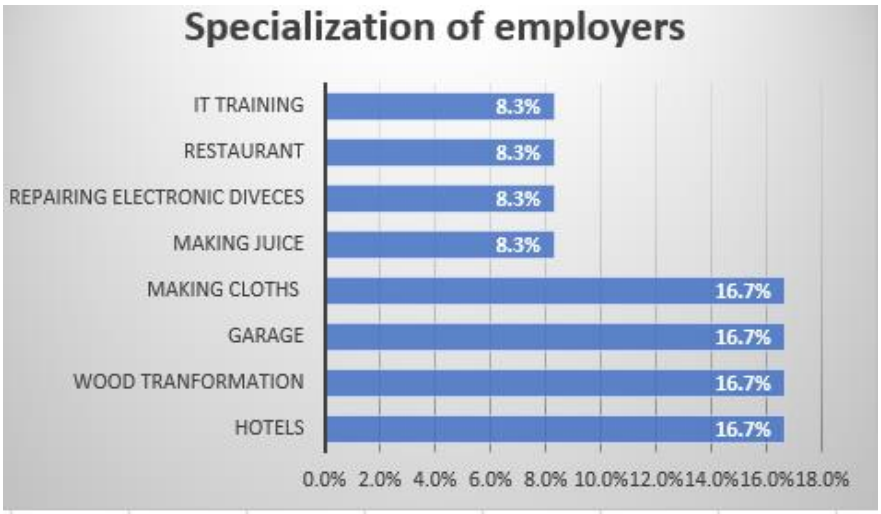
Table 2:Characteristics of TVET graduates' employment per sex

Sex	Total	Frequency of employment	%	Frequency of self-employment	%	Frequency of unemployment	%
Male	**103**	**33**	**32.04**	**32**	**31.07**	**38**	**36.89**
Female	**47**	**39**	**82.98**	**0**	**0**	**8**	**25.53**
Total	**150**	**72**	**48**	**32**	**21.33**	**46**	**30.67**

The figure above showed among 103 males, 32.04% are employed, 31.07 % self-employed and 36.89% unemployed while for female 82.98% are employed, 30.67% are unemployed and none was self-employed. In general, 65 male (63.1%) had employment in comparison with 39 female (82.89%) who had employment while 36.89% of male are unemployed in comparison with 25.53% of female with no employment.

4.1.2. Demographic data of Employers

Figure 4:Showing characteristics of employers according to their specialization

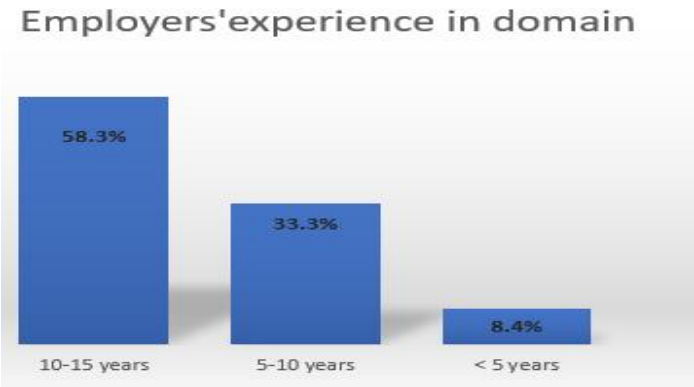


Source: Primary data

From study findings in figure 4, 12 employers who were interviewed, were specialized in hotels, 16.7% wood transformation, 16.7% garage and 16.7% tailoring while 16.7% was specialized in restaurant, 16.7% in IT training, 16.7% in repairing electronic devices, and 16.7% in making juice.

To measure and to know employers' understanding and experience on skills needed at workplace in relation to practical skills acquired at school, and how they evaluate TVET graduates in their industries, a researcher asked employers' working experience.

Figure 5:Characteristics of employers according to their experience in domain



Source: Primary data

From the research findings, 58.3% (7 employers) had 10-15 years of industrial exposure; 33.3% (4 employers) had between 5-10 years and 8.4% (1 employer) had less than 5 years.

4.2.Presentation of findings according to research objectives

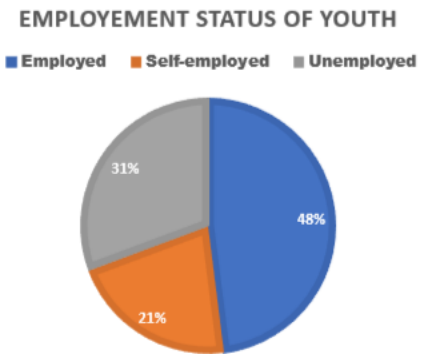
Objective1: To investigate the challenges faced by TVET Institutions in provision of required competencies and practical skills at labor market in Rwanda.

The purpose of this section was to understand why TVET youth graduates do not get employment, and what challenges faced by TVET schools to equip students with employable skills. To answer this objective, the research question one stated what the challenges faced by TVET institutions, and which affect students' required competencies and practical skills at labor market in Rwanda? The data were collected from TVET graduates, trainers, and employers.

4.2.1. TVET graduates employment status

The respondents of this categories were asked if they are currently employed, self- employed or unemployed. The chart below shows the employment status of TVET graduates.

Figure 6:Employment status of TVET graduates



Source: Primary data

Among 150 respondents, 48% (72 respondents) rated employed, 21.33% (32 respondents) rated self-employed, and 30.66% (46 respondents) rated unemployed.

In order to understand why research's respondents had not employment after graduation, 38 respondents (82.6%) highlighted common reasons which are lack of experience on the advertised job, lack of technical skills which was linked to knowledge and skills gap and lead to failure while doing recruitment exam, shortage of vacant post related to their background of trade pursued in TVET schools, and termination of work contract after being evaluated and ranked with poor performance.

Only 8 respondents (17.4%) added two reasons namely lack of start-up capital and shortage of soft skills like entrepreneurship skills to facilitate sustainability of their business.

Table 3:Relationship between employment and monthly earnings

Monthly earnings in Frw	**Employed**		**Self employed**		**Total**	
	Frequency	**%**	**Frequency**	**%**	**Frequency**	**%**
Less than 50,000	**11**	**15.28**	**18**	**56.25**	**28**	**26.92**
Between 50,000-100,000	**60**	**83.33**	**11**	**34.38**	**71**	**68**
Between 100,000-	**1**	**1.39**	**2**	**6.25**	**3**	**2**

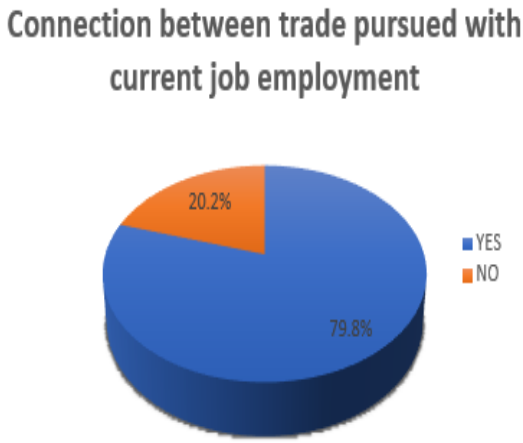
150,000						
Between 150,000-200,000	**0**	**0**	**1**	**3.13**	**1**	**0.92**
Between 200,000-250,000	**0**	**0**	**0**	**0**	**0**	**0**
More than 250,000	**0**		**0**	**0**	**0**	**0**
Total	**72**		**32**		**104**	

Source: Primary data

TVET graduates were asked to tick a range of earnings per month, 68% of respondents (71) earned between 50,000 and 100,000Frw. When converted this monthly income to daily income, it showed income of 1,667 and 3,334 Frw per day respectively. On the other side, 29 respondents (27.92%) earned monthly income less than 50,000Frw, 3 respondents (2%) gained income ranged between 100,000 and 150,000frw, and only one respondent (0.09%) earned income ranged between 150,000Frw and 200,000Frw.No respondent among 104 who had employment earned more than 200,000Frw.

Figure 7:Showing relationship between trades pursued with current occupied job

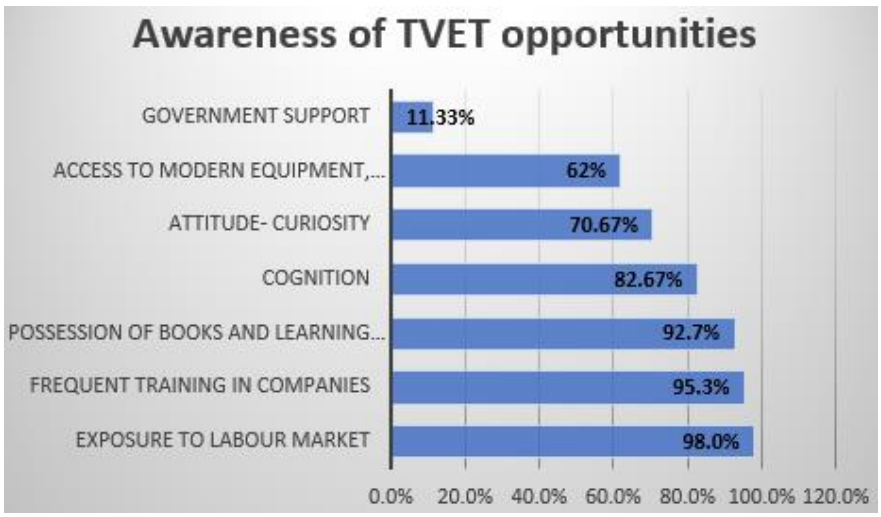
Questions: Is your current job really related to what you studied in TVET school?



Source: Primary data

To know whether there was a direct connection between what TVET graduates were doing at workplace and what they studied, 79.8% (83 respondents) confirmed direct connection between their current job with technical skills acquired at school. However, 20.2% (21 the respondents) confirmed there was no connection between occupied with their studies.

Figure 8:The average score of extent to TVET awareness employment opportunities

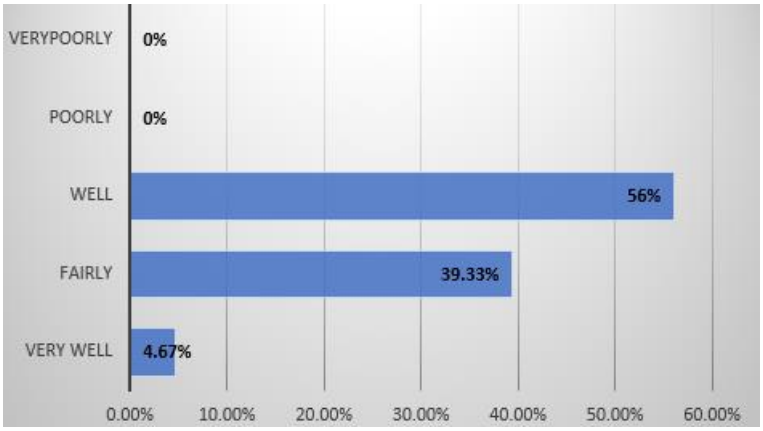


Source: Primary data

It was very interesting to hear from TVET graduates their interest in choosing TVET trades for the target of obtaining employment and hope getting training in company or hotels depending on pursued trades at 98% and 95.33% respectively.

As indicated in the above figure 8, among 150 respondents, 147 TVET graduates (98%), preferred to enroll in TVET institutions because there was more chance to be exposed on labour market and 143 respondents (95.33%) were eager to get enough time of doing practice in companies or hotel, 92.66% of respondents (139) enrolled in TVET schools assuming to get access to TVET books, 82.67% (124) for cognition. The answer from this question, showed that youth in the community have good attitude and curiosity on TVET where 106 of 150 respondents rated at 70.6%.

Figure 9:Matching technical skills acquired at school with labour market needs

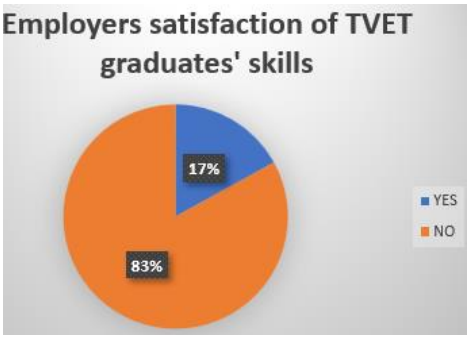


source: Primary data

The researcher to investigate if the process of teaching and learning at school equipped trainees with required technical skills with reference to employment requirement; Among 150 of respondents, 56% (84 respondents) rated well, 39.33% (59 respondents) rated fairly, a low number of 7 respondents (4.67%) rated very well.

From the above findings, the figure below showed how employers ranked their satisfaction on skills of TVET youth graduates in performing given tasks related to what they studied at school.

Figure 10: Pie chart showing employers' satisfaction of TVET graduates' skills



Source: Primary data

Even if 66.67% TVET graduates are employed, employers claimed low performance at workplace. Findings showed 17% of employers (2) accepted to be satisfied with skills of TVET graduates; 10 employers (83%) showed unsatisfactory side. To have information on their performance at workplace; a researcher used the following findings:

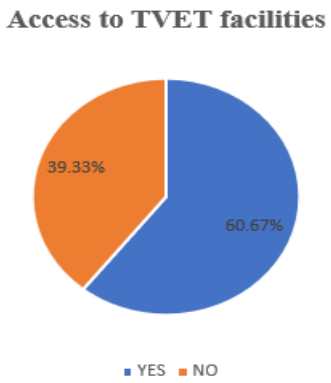
Figure 11:TVET graduates' performance at workplace

Source: Primary data

From our 104 TVET graduates with employment status, a self-assessment made on their performance at workplace by relating it with acquired technical skills at school, only 9% (9 respondents) rated excellent, 33% (34 respondents) rated very good, 55% (57 respondents) rated Fair and 3.9% (4 respondents) rated the application of acquired skills at school as poor.

The researcher then had interest to investigate the causes of the poor performance mentioned by employers and TVET graduates by collecting data from TVET graduates on accessibility of TVET facilities in their former TVET schools. The following are findings collected from TVET youth graduates.

Figure 12:Accessibility of TVET facilities to Trainees

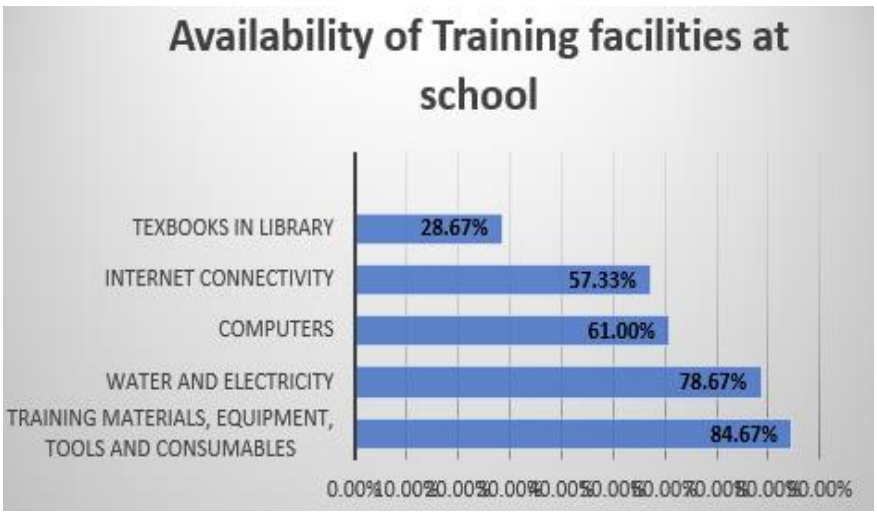


Source: Primary data

The findings showed 91 respondents (60.67%) showed they had access to TVET facilities but on the other side, the remaining 59 of respondents (39.33%) had no access to TVET training facilities.

From the findings, the researcher asked another question related to availability of training facilities at school and which could strengthen the youth employment.

Figure 13:Availability of TVET training facilities at School

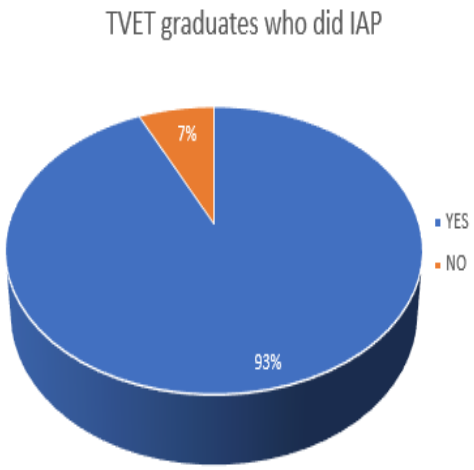


Source: Primary data

The following were the responses from 150 TVET graduates: 84.67% (127 respondents) rated training materials, tools, equipment, and consumables, 78.67% (118 respondents) rated water & electricity, 61% (92 respondents) rated

computers, 57.33% (86 respondents) rated internet connectivity, and 28.67% (43 respondents) rated textbooks in library.

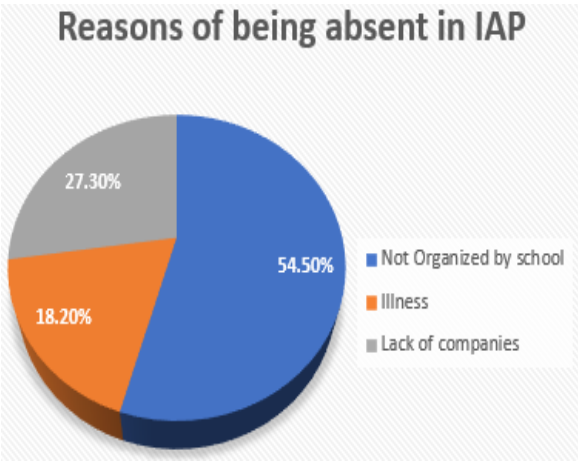
Figure 14: Exposure to labour market



Source: Primary data

The above figure shows the participation of TVET youth graduates in Industrial Attachment program. From our 150 respondents, 93% (139 respondents) cited Yes, while 7% (11 respondents) cited No.

Figure 15 :Reasons of being absent in Industrial Attachment Program

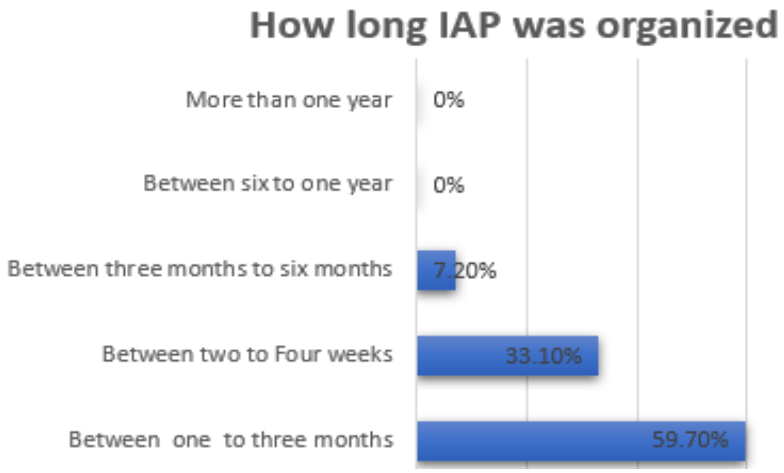


Source: Primary data

Our 11 respondents who did not IAP, mentioned some reasons of absence in IAP and 54.5% (6 respondents) cited not organized by school, 27.3% (3 respondents) cited lack of companies and 18.2% (2 respondents) were sick during period of

IAP.

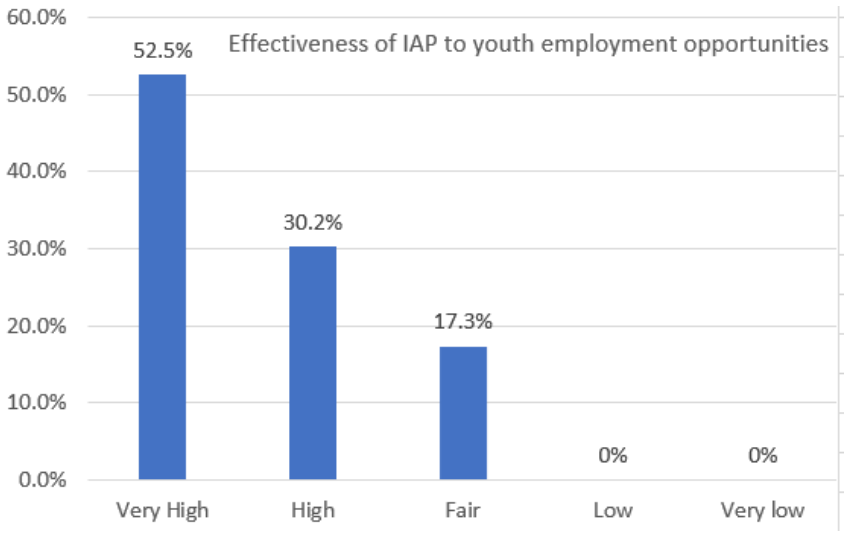
Figure 16:The period spent by TVET trainees in IAP



Source: Primary data

From the views of 139 respondents who did IAP, a high number 59.7% (83 respondents) cited doing IAP in the period of one to three months, 33.1% (46 respondents) cited to do IAP in the period of two weeks to four weeks while 7.2% (10 respondents) cited to do IAP in the period of three to six months. However, no respondent did IAP in the period of more than six months.

Figure 17: Connectivity between IAP and employment opportunities

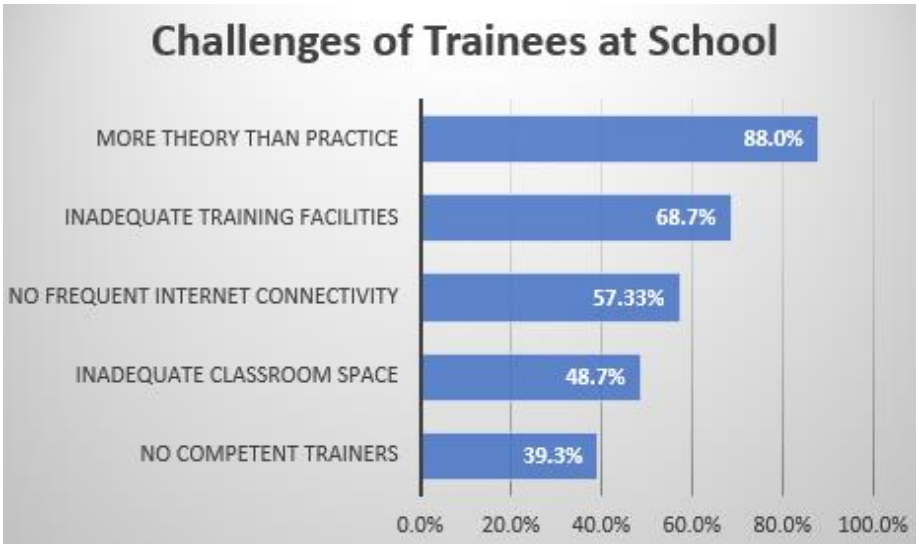


Source: Primary data

The respondents 52.5% (73 respondents) quoted Very high , 30.2% (42 respondents) cited high while 17.3% (24 respondents) evaluate effectiveness of IAP as fair. The respondents valued the content received at school level and in the IAP at 61.2% by agreeing that it is in line with knowledge, skills and attitude required at labour market. However,38.8% did not appreciate the content acquired at school . The rate of 38.8% is very high in term of employment if they join employment with no required employable skills.

4.2.2. Challenges faced by TVET graduates which affect their employment

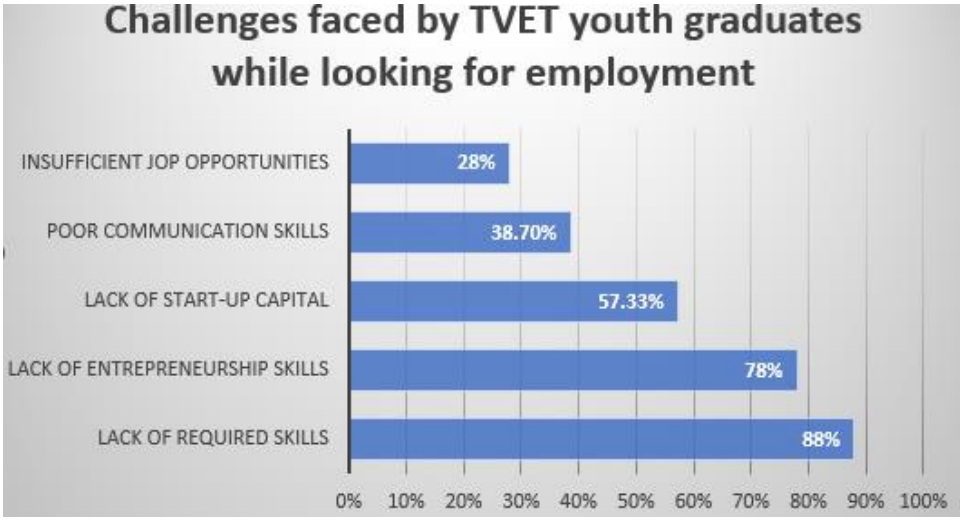
Figure 18: Challenges faced by TVET trainees at school



Source: Primary data

The respondesnt were asked to tick challenges they faced at school. Among 150 respondents, 88% (132 respondents) rated learning theory than practice, 68.7% (103 respondents) rated inadequante learning facilities (materials, tools, equipment, and consumables), 57.33% (86 respondents) rated no frequent internet connectivity at school , 48.8% (73 respondents) rated inadequante classroom space and 39.3% (59 respondents) rated no competent trainers to adopt content to trainees.

Figure 19:Challenges faced by TVET graduates while looking employement



Source : Primary data

Data collected from 150 TVET youth graduates showed , 88% (132 respondents) quoted lack of required skills to perform given recruitment exam, 78% (117 respondents) quoted lack of entrepreneurship skills, 57.33% (86 respondents) quoted lack of start-up capital and only 28% (42 respondents) quoted insuffient job opportunities.

4.2.3. Challenges faced by Trainers which affect TVET youth graduates employement

The findings from interviewed 20 trainers on their challenges faced while teaching and which they thought can affect TVET graduates on employment, 18 trainers mentioned the same challenges which were:

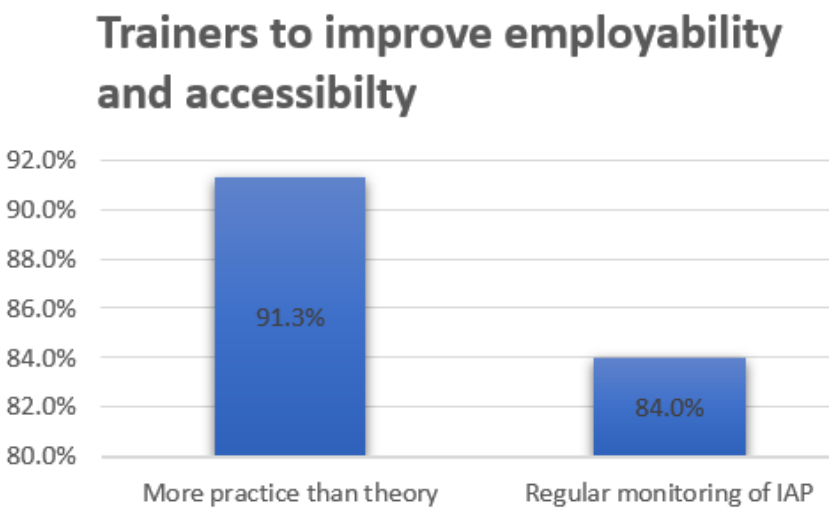
- Lack of adequate training materials, tools,equipements and consumables;
- Curriclum which keeps on changing and which does not correlate with labour market need;
- Insufficient training of Trainers on CBT/CBA ;
- Shortage of companies to host trainees during Industrial Attachment Program ;
- Insufficient time for Industrial Attachment Program.

For a school to be effective requires sufficient teaching - learning materials and their availability is very important for the teachers for better interpretation and appreciation of the concepts and contents.

Objective 2: To identify strategies opted by TVET Institutions to overcome these challenges faced by TVET graduates at the labour market.

4.2.4. Trainers' role to improve employability and accessibility of youth to the labour market opportunities

Figure 20: Strategies to improve employability



Source: Primary data

Findings from 20 traineers, 91.3% cited to focus more on practice than theory while teaching and 84% cited to monitor regularly industrial attachment program.

4.2.5. Strategies to be taken by TVET Institutions and companies to improve youth employability

Findings from 20 Trainers and 12 emplyers from Gasabo district suggested strategies that can help TVET policymakers and leaders to enhance employability of TVET youth graduates .Among them 14 trainers (70%) and 8 employers(66%) commonly suggested :

a) Promotion of youth employment

Policy makers and TVET leaders should take strategies which link technical skills development and labor market needs to promote employment. Most of

employers, Trainers and TVET graduates mentioned equipping schools with tools, equipment , materials and consumables,textbooks and where possible digitalize them to increase their accessibility. The mentioned training facilities should increase quality of training and employability.Education policymakers should improve career guidance from primary level, to insist more on preparation and presentation of project at the end of each IAP period. They should provide to start-up capital to graduates from poor families.

b) Skills development and training

Findings from the interview made with trainers and employers, most of them mentioned provision of technical skills requires TVET institutions by allocating enough budget to TVET institution especially private schools. From the highlighted challenges faced by trainees at school, 20 trainers mentioned inadeuquate training facilities (tools, equipmet, materials, and consumables) while 16 trainers added missed training facilities are affordable in the companies. Most of them mentioned also ineffective Industrial attachment program. One trainer said: "*How can you pretend a trainee to get employment while he has never make practice at school?. For example in tailoring, students used sometimes carton, while it reserved for beginers.Schools do not have electrical sewing machine, she added*". Provision of training facilities should improve trainees performance and increase their employablity.

c) Regular monitoring of TVET schools

Findings from interview made with trainers and employers most of them mentioned ineffective monitoring of teaching and learning. Responses from 9 trainers showed that for a period of 4 years, in the domain of teaching short courses, they have never seen supervisor from WDA, MINEDUC or NESA. They added that even direct supervisors at school had not been trained in CBT/CBA and had not learned education,therefore they can not monitor teaching and learning. All 20 trainers agreed that after a given period of time of accreditation, training facilities showed during accreditation period , became out of date and others consummed and not replaced. This affected negatively training

performance and employment and if no external party come to control, school can not make any improvement. A regular school monitoring would improve the quality of training and helped schools to improve make self contraol. The outcome of regular monitoring is graduation of equiped youth ready for employment.

d) Private sector involvement in education sector

Findings from Trainers and employers 87% showed little involvement of employers in curriculum development, setting content and curriculum evaluation whereas this sector is the first industry to absorb TVET graduates. They suggusted to be involved during development of curriculum especially in occupational standards, content design, industrial attachment program and assessment of the curriculum implementation.

For example one employer said: " *It is my 8 years in management of hotel, I have never participated in workshop related to TVET training, we do recruitment at leat once per year for new employees and receive trainees in IAP; None has asked us challenges met with our staff or trainees, it is also a challenge*. He added: " *They should invite us while collecting data on content to be taught at school because some times when trainees came in IAP, they complained on the content learnt at school which is differ from content practised in the companies*".

Full participation of private sector in curriculum setting, curriculum implementation campaign with private sector would be a better way in setting and evaluation education output.From the role played by private sector skills development of the young people, their involvement should be considered. When being represented , they should be awere of curriculum implementation and evaluation.

4.3.Discussion

Findings from demographic characteristics of TVET graduates per age, showed 36% rated between 18-24 years old and 64% rated between 25-35 years old. Their characteristics per sex, findings showed 31.33% were female and 68.67% were

males. This showed a high number of males enrolled in TVET schools than females and findings were also in conformity with Labor Force survey Annual report made in 2020, where the total urban youth population per age between 16 and over, showed 49.6% of youth grouped between 16-24 years old and 61% urban youth population aged between 25- 35 years old (NISR, 2020).

Looking into trades pursued by our respondents, a high number of 24% enrolled in tailoring, 14.7% in carpentry, 10% in tourism, 7.3% in hotel operation, 6.7% in leather craft, 5.3% in food and beverage, 5.3% automobile engine technology,4.7% in food processing, 4.0% in software development, 4.0% electronic services, 3.3% in accounting ,2% in networking and 1.3% in domestic & industrial electricity.

The high absorption rate observed in tailoring and carpentry showed a workplace where TVET graduates attended level one of Rwanda TVET qualification framework (RTQF) and students of this category do IAP with a period of more than 3 months, which facilitated them to get more practical skills and being more exposed to world of work. Long period taken by students in during practice, enable them to get employment and to perform well the given tasks.

The findings of the study showed 75% of the respondents, it took them 6 months to get employment, 10.6% got employment between 1-2 years and 8.7% between 2-3 years. Less number is observed to graduates who got employment in the period less than 6 months rated at 1.9% while 3.8% rated for more than 3 years. TVET schools made a considerable effort in provision of training facilities which influence its graduates' employment. However, some effort should be made to maximize number of employed graduates during the first three months after graduation. It should be done by TVET institutions in acquisition of employable skills which fasten work absorption rate by industry. The long period taken by TVET graduates to get employment is linked with the low level of skills and competencies acquired at school and other factors related to teaching and

learning. Labor Force Survey Annual report (NISR, 2017), showed that high number of youths should get employment before six months after graduation, and this is different from findings of this study, where only 1.9% get employment within six months. To get employment graduates should be equipped with employable skills otherwise, they failed recruitment exam and do not get chance to get employment.

To link employment by gender, findings showed 65 males (63.1%) had employment in comparison with 39 female (82.89%) while 36.89% of male are unemployed in comparison with 25.53% of female. According to Global report on women in tourism, showed a high number of girls in TVET institution is observed in tourism and hand craft domain including tailoring and this was solely observed in this research where high number of girls are employed in hotels and tailoring domain (Global report on women, 2019). Education campaign should be a good tool to increase number of girls in TVET schools and in all trades depending of market absorption rate survey. The campaign should be done from primary to lower secondary level.

Findings showed among 12 employers interviewed, 2 (16.7%) were specialized in hotels, 16.7% wood transformation, 16.7% garage, and 16.7% tailoring while, 8.3% was specialized in restaurant, 8.3% IT training, 8.3% repairing electronic devices, and 8.3% making juice (food transformation). The category of this group of respondents had more information about trades offered in TVET institutions and contributed to skills development of TVET trainees as they represented seven trades offered in TVET schools of Rwanda. Findings showed they understood TVET vision and made contribution to its implementation in skills acquisition and development. They understood how to evaluate TVET graduates in their industries.

Their experience was observed from research findings, where 58.3% (7 employers) had 10-15 years of industrial exposure; 33.3% (4 employers) had between 5-10 years and 8.4% (1 employer) had less than 5 years. From findings respondents were very important person and stakeholders who understood the importance and impact of skills and knowledge acquired in TVET institutions and could intervene in educational development for youth employment. Therefore, information they provided, were considered as very important to the research.

When analyzed employment status, Finding showed among 150 respondents ,48% rated employed, 21.33% rated self-employed, and 30.66% rated unemployed. From findings, among respondents one third of TVET graduates did not have an employment.

Report made in Tanzania, showed skills acquired by TVET graduates help two-thirds of them to gain employment (St et al., 2019), and this is solely the same as findings of this research. TVET institutions should increase training facilities and organize IAP to equip their trainees with employable skills to reduce rate of 30.67% graduates with no employment.

From survey made by NISR, (2020) 40% of TVET graduates were unemployment and TVET institutions are advised to take measures which help their graduates to compete at labour market by improving the quality education through equipping trainees with knowledge, skills and attitudes needed at workplace.

However, findings showed causes of unemployment of TVET graduates from Gasabo district, where 82.6% respondents highlighted lack of experience on the advertised job, lack of technical skills which was linked to knowledge and skills gap and lead to failure while doing recruitment exam, shortage of vacant post related to their background of trade pursued in TVET schools which linked to mismatch between labour demand and supply or low labor absorption capacity of the market need, and contract termination after evaluation of employee's performance and rated not competent.

Research lead by Laura Hammond in Uganda and Ethiopia in 2019 on The Impact of Youth Training and Employment on Migration Dynamics in the Horn of Africa, found that 30% of TVET graduates were unemployed or returned back to job they were doing before joining TVET institutions due to lack employable skills and recommended TVET program to focus on the quality and quantity of job required skills and take care on the profiles of the job market to absorb their graduates. Some causes of youth unemployment are linked with shortage of training facilities and training methodology (Alida,2014).

Only 17.4% respondents added lack of start-up capital and shortage of soft skills such as entrepreneurship skills, communication skills, and task management to help sustainability of their business. It is from the views of King (1994) who suggested TVET institutions to help their trainees to get easily employment by equipping them with technical skills and soft skills mentioned as communication skills, learn how to manage time, flexibility, accountability, task management, entrepreneurship skills, cooperation, and connectivity with senior workers and Government to create youth employment opportunities.

The low performance affects TVET graduates 'earnings. Findings showed 68% of TVET graduates earned between 50,000 and 100,000Frw per month, 27.92% earned monthly income of less than 50,000Frw, 2% earned between 100,000 and 150,000frw, and only one respondent (0.09%) earned income between 150,000Frw and 200,000Frw whereas no respondent among 104 who had employment earned more than 200,000Frw.

Recently from Labor Force survey annual report (NISR,2020), the average monthly earnings for upper secondary graduates, in urban area like Gasabo district was 111,017 Frw while for lower secondary graduates was 74,290Frw per month. From researcher 's respondents, among 104 employed graduates, only 3 fit in this category. Again, considering age category, between 16 -24year, report

showed a monthly earning of 39,935 frw and 153,880Frw between 25-35 years in urban area. From the study of Eichorstet al. (2012), even if the cost of education in TVET is very high in relation to general education, the earning is also very high compared to general education and should be a motivation to young boys and girls enrolled in TVET schools if they acquired necessary skills required at workplace.

In order to know whether there is a direct connection between what TVET graduates were doing at workplace and what they studied, 79.8% confirmed direct connection between their current job with technical skills acquired at the school. However, 20.2% confirmed there was no connection. This explained, although how graduates straggle in finding job and sometimes got less paid due to lack of requirements like qualification and technical skills. However, they had interested in obtaining employment and hope getting more training in company at the rate of 98% and 95.33% respectively while choosing TVET education. Findings showed also 92.66% hope to get access to TVET books, 82.67% for cognition.

It requires TVET institutions to make more emphases on Industrial attachment Program (IAP) for youth exposure to world of work. The youth in the community have positive attitude and curiosity on TVET at the rate of 70.6%. TVET institutions should improve teaching and learning to increase their motivation by equipping them with technical skills required by employers.

However, data from findings showed a very little ranking equipped trainees with required technical skills which were the requirements of employers, where 56% rated very well, 39.33% rated fairly, and 56% rated well. This led to low satisfaction of employers who claimed shortage of competent graduates at labour market. From findings, only 17% of employers were satisfied with skills of TVET graduates, however a high number of 83% of employers showed unsatisfactory side of competence of TVET graduates. They claimed recruiting graduates with no required skills needed to perform given tasks. Employers mentioned lack of soft skills by graduates such as confident, communication and negotiations skills.

It required employers to organize catch up training and regular coaching and mentoring. This was accepted by self-assessment made by TVET graduates ranking their performance at workplace.

Hirshleifer et al. (2016) agreed the positive impact of TVET which is observed only when training is responding to labour market needs and schools have training facilities to equip trainees with technical skills.

To have full information on the competence of TVET youth graduates at workplace with reference to acquired technical skills, our respondents agreed with their employers on the shortage of employable skills. Findings showed TVET youth graduates' performance at workplace, only 9% rated excellent, 33% rated very good,55% rated fair and 3.9% rated the application of acquired skills at school as poor. The feedback from respondents indicated the measure to be taken by education stakeholders in monitoring of TVET quality training especially skills acquisition with reference to occupation standards.

Some TVET institutions do not have sufficient facilities to facilitate teaching and learning as mentioned by respondents which caused poor performance of TVET graduates at work. The findings showed 60.67% had access to TVET facilities but on the other side, 39.33% had no access to TVET training facilities. Among facilities highlighted by TVET graduates which might strengthen their employment, 78.67% quoted water & electricity, 84.67% rated training materials, tools, equipment, and consumables, 61% quoted computers, 57.33% internet connectivity while 28.67% textbooks in library.

Therefore, refer to that number of TVET youth graduates who had no access to TVET training facilities, it seems that there are other factors which contributed to their education including IAP where they should have access to company facilities and which may contribute more on their employment. However, this showed also why some of TVET youth graduates had no work or spent a long time with no employment after graduation.

The availability of training facilities make youth competent at labour market as they contribute to acquisition and accommodation of knowledge, skills and attitude required at labour market. In order to increase youth employability, the awareness of the availabilities of these facilities at school and in the companies should be a requirement.

In order to know number of trainees who participated in IAP, findings showed 93% cited doing IAP, while 7% cited No. IAP constitutes the key element of TVET program where it helps trainees to be exposed to the world of work. According to Williams(2008), trainees in IAP got more chance to get more practical skills and more chance to be employed with a positive attitde of 70% and Whalley (1986) added 80% of young students who did IAP, have been employed and secured at work.

The reasons of being absent in IAP were different as mentioned by respondents, 54.5% cited not organized by school, 27.3% cited lack of companies while 18.2% were sick during period of IAP. The period of IAP was criticized by both employers and TVET graduates as short and it affected their skills. From findings, Ministry of education should improve monitoring strategies in place to ensure all trainees are doing IAP. From findings of the study, period of IAP is short and prevent achievement of attended result. Findings showed 59.7% rated doing IAP in the period of one to three months which is the period indicated in RTB chronogram of Level 3 to 5 where students have to do three weeks of IAP per year. 33.1% rated two to four weeks while 7.2% quoted three to six months. However, no respondent indicated doing IAP in the period of more than six months.

However, finding showed the importance of IAP where a high number of TVET graduates 52.5% quoted importantce of IAP Very high , 30.2% quoted high while 17.3% evaluated effectiveness of IAP as fair. The respondents valued connection of the content received at school and in the IAP at 61.2% by agreeing that it is in line with knowledge, skills and attitude required at labour market.However,38.8%

did not appreciate the content acquired at school .

Findings on the challenges faced by TVET youth graduates at school , 88% rated learning theory than practice, 68.7% rated inadequante learning facilities (materials, tools, equipment, and consumables), 57.33% quoted inadequate internet connectivity at school , 48.8% inadequante classroom space and 39.3% mentioned no competent trainers to adopt content to trainees.

Today world of work required high-skill technology to perform given employment.Shortage or lack of training facilities affect negatively performance of TVET graduates at employment. Schools with not training facilities do not meet minimum standatds to offer technical skills and choose theoritical training than practice which lead to unemployment of its graduates (Labour Force Survey, 2021).

For example data collected from 150 TVET youth graduates showed , 88% quoted lack of required skills to perform given recruitment exam, 78% quoted lack of entrepreneurship skills, 57.33% quoted lack of start-up capital and only 28% quoted insuffient job opportunities. Findings showed connection between lack employment with inadequate required skills at worplace like communication skills, entrepreneurship skills and technical skill and these skills are acquired at school and in companies.

Generally, knowledge and skills gap, poor support or facilitation of new entry into job market, high-skill technology labour market, low labour absorption capacity and labour market demand and supply were mentioned as hurted youth employment (Labour Force Survey, 2021).From the World Bank (2020) report some of the causes of youth employment are, lack of skills and knowledge which prevent young people the advantage of getting employment and these skills and knowledge should be acquired from TVET institutions as reported by Skills for Productive Employment, (2007). St et al., (2019), added the primary cause for

the country's people unemployment including youth, is mismatch between the skills needed at labour market and the skills of graduates acquired at school.

However, trainers also showed their challenges faced while teaching and which affected negatively trainees on employment. The findings from interviewed 20 trainers on their challenges faced while teaching, 18 trainers mentioned the same challenges which were:Lack of adequate training materials, tools,equipements and consumables,Curriclum which keeps on changing and which does not correlate with labour market need,insufficient training of trainers on CBT/CBA, shortage of companies to host trainees during Industrial Attachment Program , and insufficient time for Industrial Attachment Program.Therefore, according to UNESCO and ILO (2021) challenges from findings showed, if no strategies made to overcome them, TVET graduates may continue to suffer while looking for employment.

To identify strategies opted by TVET Institutions to overcome these challenges, findings from 20 trainers showed 91.3% quoted to focus more on practice than theory while teaching and 84% added to monitor regularly industrial attachment program.TVET school leaders have the role of monitoring implementation of CBT/CBA which focused more on practice than teaching theory. Practice improve technical skills and lead to employment.

Findings from 20 Trainers and 12 emplyers suggested additionalal strategies that can help TVET policymakers and leaders to enhance employability of TVET youth graduates .Among them 14 trainers (70%) and 8 employers(66%) commonly suggested :

Policy makers and TVET leaders to link technical skills development and labour market needs, by Equiping schools with tools, equipment , materials and consumables,and textbooks. More attention should be made to Private schools which do not have enough training facilities while accommodate a high number

of trainees. For example one trainer said: "*At our school, no book related to the trade I am teaching, I try to make notes refer to curriculum. So it is not very easy for our trainees to read a book and do their homework".*

Interview made with Trainers and employers, most of them quoted provision of technical skills, requires TVET institutions to expose trainees on the world of work through doing IAP. During the period of IAP , trainees have more chance to access of updated training facilities which sometimes differ from used facilities at their respective schools.

Refer to the survey conducted in different countries which showed period of IAP to be not less than six months (Whalley,1986). This period from interview made with employers, most of them requested the period of IAP that should be at least three months per year equivalent 9 months for students who attend L3-L5 and six months for training of short courses.

One employer said: " *How can you learn to used carpentry machines in three weeks ? it is impossible. They are in 5 categories, and you ask a young girl or boy to perform its parts in three weeks. It requires enough time to know how it works and start performing a task. it can't be possible".* The period of IAP should be as mentioned by interviewed Trainers , one month during training period and two month during long school holiday.

During IAP period , trainees should not do IAP in morning time only but also in the afteroon. Incollaboration of schools, parents , and companies, school should provide to interns lunch. A trainer said: "*schools do not have budget to finance students in companies, students in short course do not go to AIP, we fill sometimes logbooks at school and ask companies to sign them. We do not have money and parents are not able to pay IAP. MINEDUC should intervene".*

In order to reduce overcrowding of trainees in the same and limited companies during IAP, MINEDUC should alternate time of doing Industrial attachment Program for L3, L4 and L5.

In summary the respondents mentioned challenges faced at employment namely mismatch between labour market demand and supply, low labour absorption capacity of market need, high- skill technology and less support given to TVET graduates to start their own business, and knowledge & skills gap. These challenges affected their living status due to lack of employable skills required by employers and reduce enrollment of new canditates in TVET schools.

According to Rwanda Youth Labour Markets and the School-to-Work, (2020.) on strategy of reducing challenges faced by youth to get employment increasing in-company training period, should be more than six months to provide to youth needed skills which easy them to get well-specified employment. From the data of EICV5 2016/2017 the increase of time spent by trainees in company will increase the percentage of youth employment with time.

TVET approaches of teaching (Competence Based Training) should focus on linking school-based training with labour market needs and certification should be based on acquired technical skills with reference to employability options. The report showed full involvement of all stakeholders during the development of curriculum which should be flexible to adjust emerging technological skills with work requirements.

CHAPITER 5: CONCLUSION

5.1.Introduction

This chapter provides brief clarification of summary, conclusion, and recommendation where a researcher evidently presented a wide-ranging image of findings from the study namely impact of Technical and Vocational Education and Training on Youth employment in Rwanda. A case of study: Gasabo district. The presentation of findings was done with reference to research objectives which helped a researcher to make clear conclusion and recommendations in relation to the topic of study.

5.2.Summary of findings

In this research of study, a researcher studied theme with focus on research objectives which were to investigate the challenges faced by TVET institutions in provision of required competencies and practical skills at labour market in Rwanda and to identify strategies opted by TVET institutions to overcome challenges faced by TVET graduates at the labour market. The findings were collected from 192 respondents (150 TVET graduates, 20 trainers, and 12 employers).

To come up with reasonable results, the study was guided by two research questions namely what are the challenges faced by TVET institutions and which affect students' required competencies and practical skills at labour market in Rwanda and what are the strategies to be opted by TVET institutions' leaders to overcome these challenges? Two data collection tools were employed. Questionnaires used to collect data from TVET graduates and interview to collect data from TVET trainers and employers.

Demographic characteristics of respondents were based on age, sex, trade followed by TVET graduates and absorption period to get employment. For employers, a researcher was interested in the domain of specialization of the company and experience of the company in the domain of investigation.

i) To investigate the challenges faced by TVET Institutions in provision of required competences and practical skills at labour market in Rwanda.

Rwanda has made different policies to increase employability especially of youth, Findings showed a good contribution of TVET to help its graduates to get employment where 60.34 % of respondents had employment. However, insufficient of training facilities at school, insufficient of period of Industrial attachment program, untrained trainers in CBT/CBA, low involvement of private sector in educational activities contributed to unemployment of some TVET graduates,

During this research, among the TVET graduates participated, 30.66% were unemployed. Even if there was a god number of Youth employed, 27% of them, their monthly earnings were less than 50,000 Rfw and also 20.2% of employed youth, confirmed their occupation to be different from pursued trade.

Youth highlighted some challenges affected their employment and 56% of respondents lack employable skills to enable them to get employment. The main challenges mentioned, were lack or shortage of access to training facilities rated at 39.33% while 7% of respondents mentioned lack of industrial attachment program where 54.5% confirmed, it was not organized by their schools. However, some schools organized IAP even the implementation was not effective. Short period of IAP rated 17.3% of respondents, was organized between one to three months and did not help trainees to be more exposed to labour market. Regarding its effectiveness, 17.3% rated it as fair to expose youth on employment opportunities. That is why 83% of employers are not satisfied with TVET graduates skills and as solution, employers used mentoring and catching to capacitate the new employees.

Furthermore, trainees rated 88% of learning more theory than practice at school and 68.7% mentioned reason of inadequate training facilities such as materials, tools, equipment, and consumables. However, 39.3% rated lacking competent

trainers able to adopt content to trainees. Findings showed also other challenges mentioned by trainers and employers which affected acquisition of competencies and technical skills of TVET graduates such as lack of adequate training materials, tools,equipment and consumables, curriclum which keeps on changing and which does not correlate with labour market needs, insufficient training of Trainers on CBT/CBA, shortage of companies to host trainees during IAP,low involment of private sector in curriculum development ,and mismath between enrloment of trainees in some trades and labour market needs.

ii) To identify strategies opted by TVET Institutions to overcome these challenges faced by TVET graduates at the labour market

Strategies to overcome mentioned challenges,84% of trainers suggested to regularly monitor IAP and 91.3% cited to focus more on practice than theory. Among other strategies cited, were equipping schools with training facilities; involving all private sector in curriculum development, implementation, and evaluation; promotion of youth employment; and skills development and training.

5.3.Conclusion

There is good contribution of TVET on Youth employment and number of TVET graduates continue to increase. Their contribution to development of their families and the country is well considered. However, more effort should be made to maximize the number of TVET graduates who get employment after graduation by improving quality of teaching and linking acquired technical skills with employable skills. More effort should be made in training of all TVET trainers on CBT / CBA, equipping schools with training facilities and increasing period of IAP.

Industrial attachment program increases trainees' performance and is considered as one tools to expose trainees on real world of work and help to concretize content taught. Students are straggling of finding companies to host them during IAP, and it should be good when period of IAP differ according to the level and trades.

The improvement of country economy requests the well-trained employees and the role of TVET is to match demand with supply. The enrolment in TVET trades does not refer to available market absorption. Therefore, education policy makers have the role to match demand with supply by making employment survey every five years and to accomplish this task requires full involvement of private sector and collaboration with other Ministries.

TVET sector, faces some challenges to equip TVET institutions with employable skills, but in collaboration with all concerned stakeholders as stipulated in the research, more and sustainable strategies cited will help to overcome them.

5.4.Recommendations

From data analysis of research findings, trainees, trainers, and employers showed different challenged faced. These challenges affected negatively TVET youth graduates' employment and at the same time affected employers' companies. From these reasons, researcher suggests the following recommendations:

1. Ministry of Education to set out Dual TVET Training policy for level one to five.
2. Ministry of education to provide to TVET private schools consumables as they accommodate high number of trainees than public schools.
3. Ministry of Education to strengthen expansion of training of all trainers on CBT/CBA

5.5.Suggestion for further research

This research was about the Challenges Facing Technical and Vocational Education and Training Institutions on Youth employment in Rwanda. Specifically, research was conducted in Gasabo district investigating challenges faced by TVET graduates from Level one to Level five. Therefore, further research should be comparative research on TVET graduates from Technical secondary School and Polytechnic and also research on Transition from secondary Technical Secondary Schools to polyethnic in Rwanda.

REFERENCES

Abbas, M., Raja, U., Darr, W., & Bouckenooghe, D. (2014). Combined Effects of Perceived Politics and Psychological Capital on Job Satisfaction, Turnover Intentions, and Performance. Journal of Management, 40(7), 1813–1830. https://doi.org/10.1177/0149206312455243

Organization for Economic Co-Operation and Development International Labour Organization. (2014). Achieving better youth employment outcomes: Monitoring policies and progress in G20 economies.

Akpomi, M. E. (2009). Achieving millennium development goals through teaching of entrepreneurship education in Nigeria higher education institutions. European journal of Social Science, 8(1), 152-159.

Bank of Australia, R. (2022). Unemployment: Its Measurement and Types.

Becker Gary S. (1975). Human Capital Theory: A theoretical and Empirical analysis, with special reference Education.

CEDEFOP. (2015). Handbook for VET providers. https://doi.org/10.2801/82638.

Niwemwiza, E. (2021). College of arts and Assessment of the Contribution of National Employment Program on Unemployment Alleviation in Youth and Women in Rwanda 2014-2018: A Case of Rulindo District.

Dondofema, J., Mwenje, J., & Musemwa, L. (2020). The Industrial Attachment Programme - History, Benefits, Challenges and its Adoption in Zimbabwe: A Review. Asian Journal of Education and Training, 6(3), 412–420. https://doi.org/10.20448/journal.522.2020.63.412.420.

Fox, L.,(2017). The evidence is in: How should youth employment programs in low-income countries be designed?

Rwamu, F. B. (2019). Factors affecting practical skills acquisition among technical and vocational education training learners: a case study of IPRC KIGALI.

David, H., (2005). A brief history of Neoliberalism

Hasan, B. and Maizam, A. (2017). The Imperatives of Technical Drawing Skills in Teaching TVET Subjects: The Case of Nigeria

Hirshleifer, S., David, M., Rita, A., & Cristobal, R.C.,(2014) The Impact of Vocational Training for the Unemployed: Experimental Evidence from Turkey.

Klaus, S. (2017). World economic forum: Global competitiveness report 2017/2018

Klaus, S. (2019). World economic forum: Global competitiveness report 2019

ILO (2020). World employment and social outlook Trends 2020.

Ines, A., & Ouandji, M. (2014). Investigating the impact of technical and vocational educational education (TVET) on youth unemployment in Ghana.

Ismail, Z., & Mujuru, S. (2020). Evidence synthesis paper series executive summary workplace-based learning and youth employment in Africa.

Ismail, Z., & Mujuru, S. (2020). Evidence synthesis paper series workplace-based learning and youth employment in Africa. www.gsdrc.org/go/research-helpdesk.

Janice, T**.,** (2013). Technical and Vocational Education and Training (TVET) interventions to improve the employability and employment for young people in low -and middle-income countries: A systematic review.

JICA, (2021). Data collection survey on Technical and Vocational Education and Training in the Republic of Rwanda: Final Report.

Labour Force Survey. (2021). http://www.statistics.gov.rw.

Laura Hammond (2019). The Impact of Youth Training and Employment on Migration Dynamics in the Horn of Africa.

Mantar, L. (2013, August 21). Youth Unemployment Contributes to Underdevelopment. Retrieved October 30, 2013, from The Accra Mail: http://www.theaccramail.com/?p=2091.

Maurer, M., Zürich, P. H., & Walker, K. (2015). SDC, F2F of the Employment and Income Network The role of the private sector in vocational skills development.

MIFOTRA (2019). Design of Five-year National Employment Program (NEP) for Rwanda

MINECOfin (2013). Rwanda Private Sector development strategy 2013-2018

MINEDUC_Service_charter. (n.d.).

Mukabatsinda, I. (2016). University of Rwanda College of business and economics school of Business Master of Business Administration (MBA) the interface of positive relationship at workplace and the productivity of employees in public institutions of Rwanda; a case study of the institute of scientific and technological research (IRST).

National Institute of Statistics of Rwanda. (2017). EICV5: integrated household living conditions survey = (enquête intégrale sur les conditions de vie des ménages) 2016/17. EICV5 youth thematic report.

National Institute of Statistics of Rwanda. (2021). Labour force survey annual report 2020.

Ndile, L. M. (2018). The Influence of competency based technical training on youth employability: a study of technical training institutions in Nairobi County. https://su-plus.strathmore.edu/handle/11071/6069.

Norcini,J.and Burch,V.(2007).Workplace – Based Assessment as an educational tool:AIME Guide.No 31.

Okwelle, P., Chijioke, P., & Shirley, C. (2014). Journal of Education and Practice www.iiste.org ISSN. In Online) (Vol. 5, Issue 8). www.iiste.org.

Olaitan, S.O. (1996), The meaning of Vocational Education and its implication to National Policy on education, Nsukka, University of Nigeria.

Oosterom, M. (2018). Youth employment & citizenship: problematizing theories of change About this report.

Oppenheimer and spicer, (2011). Putting young Africans to work: Addressing young Africa's unemployment crisis.

Piscayanti, K. S.,and Suprianti, G. A. P. (2020). Positive Character Education Values Found in Simba, The Lion King (1994) Movie. Journal of Educational Research and Evaluation, 4(3), 289–297. https://ejournal.undiksha.ac.id/index.php/JERE.

Reitz, C. (2018). Effects of TVET on the well-being of youth from low

socioeconomic backgrounds Evidence from the Don Bosco Technical Institute in Ashaiman, Ghana.

Rukundo, D., & Sikubwabo, C. (2021). Technical and vocational education and employment opportunities contribution of technical and vocational education and training (TVET) program in promoting employment opportunities among the youth in Rwanda: a case of Nyabihu district (Rwanda).

Rwanda _Youth Labour Markets and the School-to-Work. (n.d.).

Rwfo, E. &. (2014). Analysis of Gender and Youth Employment in Rwanda. www.afdb.org

Rwanda development Board (2019). National Skills develppment and employment promotion strategy 2019-2024.

St, T., Lewis Building, A., & Road, O. (2019). The Impact of Youth Training and Employment on Migration Dynamics in the Horn of Africa. London. www.soas.ac.uk.

Technical and Vocational Education Training Institutions Way of Future for Youth Empowerment and Creation of Market Oriented Job Opportunities in Rwanda. (2019). International Journal of Research in Sociology and Anthropology, 5(4). https://doi.org/10.20431/2454-8677.0504003.

UN (2004). Global E-Government Readiness report 2004 towards access for opportunity.

UNESCO (2018), Education_Sector_Strategic_Plan.

UNESCO & ILO. (2011). Revised Recommendation concerning Technical and Vocational Education. Paris: UNESCO.

UNESCO-UNIVOC (2019). Innovation in TVET.

UNESCO, (2020). Education for sustainable development.

UNFPA, (2017). Shaping future for young people.

University of Rwanda (UR) college of business and economics school of economics department of economics the effect of employment on poverty reduction in Rwanda: an empirical analysis. (2016).

APPENDICES:

UNIVERSITY of RWANDA

COLLEGE OF EDUCATION

RESEARCH AND INNOVATION UNIT

Rukara, 21st July 2022
Ref: 03/DRI-CE/104/EN/gi/2022

The District Executive Administrator
Gasabo District
Kigali-City
Rwanda

Re: Research recommendation letter for Mr Jean de Dieu HAKIZAYEZU

On behalf of the University of Rwanda-College of Education (UR-CE), I am pleased to introduce **Mr Jean de Dieu Hakizayezu**, a post-graduate student at the School of Education of UR-CE. Mr Hakizayezu is writing his thesis on: the **"Influence of Technical and Vocational Education and Training on Youth Employment in Rwanda. A Case of Gasabo District"** to complete his Master of Education in Leadership and Management.

He wishes to investigate the contribution of TVET to youth employment, the challenges faced by TVET graduates on the job market, and suggest to TVET leaders strategic solutions to those challenges. Thus, he requests permission to collect data from TVET trainers & trainees, TVET graduates and employers selected from TVET schools and companies located in the Gasabo district.

Mr Hakizayezu's research project passed successfully through an internal collegial ethical process. Thus, the University of Rwanda-College of Education: Directorate of Research and Innovation confirms that his research adheres to ethical standards and principles. Therefore, we kindly request you to accord him your cooperation in this research.

We very much hope to get your usual cooperation.

Yours sincerely.

COLLEGE OF EDUCATION – UNIVERSITY of RWANDA – RESEARCH AND INNOVATION UNIT

Digitally signed by
UR (Rukara, Directorate of Research & Innovation)
Date: 2022.07.21
Time: 15:05:11 +2'00

Assoc. Prof. Eugene Ndabaga
Director of Research and Innovation
University of Rwanda-College of Education
E-mail: ndabagav@yahoo.ie
Mobile: +250788308862

Cc:

- Principal, UR-CE
- Postgraduate Program Coordinator, School of Education
- Dr. Jean François Maniraho (Supervisor)

Republika y'u Rwanda
Umujyi wa Kigali

Ref. nº .1.4.0../07.01.16/21

Kigali, on... 26 JUIL 2022

Mr. HAKIZAYEZU Jean de Dieu
Tel: 0788816940
Email: hakizajaa@gmail.com

Dear Sir,

Re: Your application for data collection authorization

Reference is made to your letter dated on 25th July 2022 applying for data collection authorization in Gasabo District/ City of Kigali on "**Influence of technical and vocational education and training on youth employment";**

We would like to inform you that your request is hereby granted. However, before starting your research, you must first introduce you to the **Administration of Gasabo District,** and clarifying your need.

Sincerely,

UMUJYI WA KIGALI

Joseph NIYONGABO
Director General of Corporate Services

Cc:
- City Manager of the City of Kigali
- District Executive Administrator/ Gasabo

KIGALI

APPENDIX 2

QUESTIONNAIRES

Impact of Technical and Vocational Education and Training on Youth Unemployment in Rwanda

Dear Respondent,

This study is being conducted on the highlighted topic for academic purposes and the researcher grants to keep confidentiality on issues information and will be used only for academic purposes.

Please return the questionnaire to the Administrator of this form promptly after being completed.

Please fill out both sections of this questionnaire by indicating a **TICK SIGN** on closed ended questions or provide an explanation to the open-ended questions as required. Thank You

1. Which age are you?

   18-25 Years: ☐ Specify also your gender: ☐

   Female

   26-35 ☐ Years: ☐

   Male:

2. Which trade (specific Technical Vocational education and training **course)** did you follow?

   ……..…….....

3. Are you:

   Employed? ☐

   Self-employed ☐

   Unemployed ☐

4. If you do not have a job, why?

……

5. If you are employed or self-employed,

How long it has taken you to find a job after graduation?

- ☐ Less than 4 months
- ☐ Between 4 months and 1 year
- ☐ Between 1 year and 2 years
- ☐ Between 2 years and 3 years
- ☐ More than 3 years

6. How much do you earn per month?

- ☐ Less than 50 000 Frw
- ☐ Between 50 000 Frw – 100 000 Frw
- ☐ Between 100 000 Frw – 150 000 Frw
- ☐ Between 150 000 Frw – 200 000 Frw
- ☐ Between 200 000 Frw – 250 000 Frw
- ☐ More than 250 000 Frw

7. Is your current job really related to what you studied in TVET school?

Yes ☐ No ☐

8. Before you decided following the **TVET** course, kindly indicate on the table below the extent to which you were aware of the technical training employment opportunities. **(With 5 being the highest and 1 the lowest rating)**

	5	4	3	2	1
Cognition					
Attitude -curiosity					
Exposure to labor market needs					
Access to modern equipment, tools, materials and consumables in workshops					
Frequent training in Company/ hotels					
Government support					
Possession of books and learning resources					

9. Kindly rate how followed trade was taught to equip you with technical skills needed/ required at labor market?

	Very poorly	Poorly	Well	Fairly	Very well
Skills acquired at School					

10. As a **TVET** graduate, have you satisfied with the accessibility to TVET's facilities in your institution?

Yes ☐ No ☐

11. If **yes,** what kind of TVET facilities does your TVET institution have that strengthened your skills development needed at labor market?

.....

Have you done Industrial attachment program (IAP)

Yes ☐ No ☐

12. If yes, how long has it organized?

Between two to four weeks ☐

Between one to three months ☐

Between three – six months ☐

Between six- one year ☐

More than one year ☐

13. If **no**, why not?

.....

14. To which extent did you evaluate the effectiveness of IAP to employment opportunities? **(With 5 being the highest and 1 the lowest rating)**

	5	**4**	**3**	**2**	**1**
Effectiveness of IAP on employment opportunities					

15. In your opinion, in summary explain how the content of the trade you pursued was taught to make you competent in line with knowledge, skills, and attitude required in the labor market?

.....

How do you rate your performance at workplace refer to acquired skills?

Excellent	**Very Good**	**Fair**	**Poor**	**Very poor**

16. How would you rate the trainers' training skills, knowledge and communication abilities refer to required skills at workplace?

Excellent	**Very Good**	**Fair**	**Poor**	**Very Poor**

17. What are the major challenges that you faced while you were at school? Select as many as you canfrom the following.

- ☐ Inadequate classroom space
- ☐ Inadequate learning materials and equipment
- ☐ No competent trainers in the domain
- ☐ Less time of practice than theory
- ☐ No frequent internet connection at school

18. State any four challenges you faced while looking employment or deciding to be self employed

    a)

    ……

    b)

    ……

    c)

    ……

    d)

    ……

19. Suggest any four solutions for improving the acquisition of labor market related technical skills that can increase chances of TVET graduates/ youth employment to get employment:

    a) ..……

    b) ……..……

    c) ……..……

20. Indicate four factors which you think may improve the achievement of market related technical skills among the Trainees/ youth in your former TVET institution:

    a) ……

    b) ……

    c) ……

21. State any four advice you can give to TVET institutions' leaders and policymakers to improve training related to employment opportunities

    a) ……..……..

    b) ……..……

    c) …….

    d) ……..

22. Please rate with a tick in each of these statements related to your experience as an employee.

	Very Good	**Good**	**Satisfactory**	**Poor**	**Very Poor**
Ability to apply the learnt skills					
Ability to use appropriate working techniques					
Ability to managepractical assignments					
Performance on the job					
Level of competence in applyingskills					
Ability to work with others					
Attitude to workplace					
Ability to work without supervision					
Ability to solve practical problems					

APPENDIX 3

Interview with Employers

Investigating the Impact of Technical and Vocational Education and Training on Youthemployment in Rwanda.

Dear Respondent,

This study is being conducted on the highlighted topic for academic purposes and the researcher grants to keep confidentiality on issues information and will be used only for academic purposes.

1. How long does your company has?
2. What is the specialisation of your company?
3. Do you employ TVET graduates?
4. If yes, are you satisfied with their skills to the contribution of company/ hotel production?
5. If No, explain shortly.
6. What are the advices can you give to the Policy makers, TVET leaders to improve quality of training so that TVET graduates can easily find employment and being competent at labour market need?

APPENDIX 4

Interview with TVET Trainers

Investigating the Impact of Technical and Vocational Education and Training on Youthemployment in Rwanda.

Dear Respondent,

This study is being conducted on the highlighted topic for academic purposes and the researcher grants to keep confidentiality on issues information and will be used only for academic purposes.

1. What role do you think TVET Plays for youth employment in Rwanda?
2. What are some of the challenges you face while teaching and which can affect TVET graduates on employment?
3. What can be your contribution to overcome these challenges?
4. Suggest any four TVET leaders' strategies to overcome these challenges?