

**MASTER OF SCIENCE IN TECHNICAL EDUCATION  
(ELECTRICAL & ELECTRONIC ENGINEERING)**



**Current State of Practices of Cameroon TVET Institutions:  
Case of Northern Region of Cameroon**

**By**

**Mahonde Daoudou Pascal**

Student No: **161031207**

**M.Sc. TE (EEE)**

Supervisor: **Professor Dr. Che Kum Clement**

DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION  
ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)  
DHAKA-BANGLADESH

**NOVEMBER, 2018**

**Current State of Practices of Cameroon TVET Institutions:  
Case of Northern Region of Cameroon**

**By**

**Mahonde Daoudou Pascal**

**Student No: 161031207**

**M.Sc. TE (EEE)**

A Thesis Submitted in Partial Fulfillment of the Requirement for the degree of **Master of Science in Technical Education** with Specialization in **Electrical and Electronic Engineering**

**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION**

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**

**ORGANISATION OF ISLAMIC COOPERATION (OIC)**

**BOARD BAZAR, GAZIPUR-1704, DHAKA, BANGLADESH**

**NOVEMBER, 2018.**

**RECOMMENDATION OF THE BOARD OF EXAMINERS**

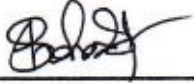
The thesis titled “**Current State of Practices of Cameroon TVET Institutions: Case of Northern Region of Cameroon**” prepared by **Mahonde Daoudou Pascal**, Student No. **161031207** of Academic Year **2017-2018** has been found satisfactory and accepted as partial fulfillment of the requirement for the degree of Master of science in Technical Education (MSc. TE) on November, 2018.

**BOARD OF EXAMINERS**



**Prof. Dr. Che Kum Clement**  
TVE Department

**Chairman**  
(Supervisor)



**Prof. Dr. Shahadat Hossain Khan**  
TVE Department and

**Member**  
(Internal)



**Prof. Dr. Md. Abu Raihan**  
TVE Department and

**Member**  
(Internal)



**Prof. Dr. Abdul Awal Khan**  
Ex - Director  
IER Department  
Dhaka University

**Member**  
(External)

## DECLARATION

This is to certify that the work presented in this thesis is the outcome of the investigation carried out by **Mahonde Daoudou Pascal** under the supervision of **Professor Dr. Che Kum Clement**, Dean Faculty of Science & Technical Education and Head, Department of Technical and Vocational Education (TVE), Islamic University of Technology (IUT), Board bazar, Gazipur, Bangladesh. It is hereby declared that this thesis/report or part of it has not been submitted elsewhere for the award of any Degree or Diploma. All literature and contributions cited are fully acknowledged.



**Prof. Dr. Che Kum Clement**  
Supervisor Dean, Faculty of Science & technical  
Education and Head Department  
Technical and Vocational Education (TVE),  
Islamic University of Technology (IUT),  
Gazipur, Bangladesh.



**Mahonde Daoudou Pascal**

Student No. 161031207of  
Academic Year: 2017-2018

## **DEDICATION**

This Research work is dedicated to my dear uncle **Oussoumanou** and my dear mother **ATTA**.

## ACKNOWLEDGEMENT

First and foremost, all praise is due to Allah, Lord of the World, the entire merciful, the especially merciful. Blessings and peace be upon his Messenger and servant Muhammad and upon his family and companions and whoever follows the guidance until the day of resurrection. Every journey has a beginning and an end. As the long journey through this program and the research work comes to an end, I would like to express my sincere gratitude to the people whose assistance made this transformative research work a huge success. Whenever a person is adequately motivated, discipline will take care of itself. I would like to thank my supervising Professor, **Professor Dr. Che Kum Clement (Dean), Faculty of Science and Technical Education and (Head), Department of Technical and Vocational Education, IUT** for his motivation and guidance throughout this daunting yet fascinating journey. Special thank goes to him for tireless and very useful guidance during this study. His much invoked corrections and attention were instrumental to the completion of this study.

I would also like to acknowledge and thank the committee members and the entire staff of TVE Department who were more than generous with their expertise and precious time and for their guidance and valuable suggestions throughout the entire process.

In addition, I wish to express my appreciation and thankful to my mother ATTA, my uncle Oussoumanou, my aunt Aminatou Ousman, my uncle Sokey Sambo G, Dr. Sepde Oumarou, Didja Ani, Mr. Hamadou Missa, my dear Mr. Ali Yondjeu and my dear elder brother Zangare without forgetting others brothers and sisters for their indispensable different contribution for my education since primary school.

I sincerely appreciate the effort of all my friends and course mates most specially Oumarou Adelph, Mohamud Musa, Rachida for their moral and spiritual support and encouragement during the study and other people who volunteered their time, resources and viewpoints to make this research a success.

Finally, I wish to express my thankful and gratitude to one my best friend Mr. Oumarou Adelph for his unconditional support and coordination in the process of data collection despite the various inconveniences he faced.

## TABLE OF CONTENTS

<b>RECOMMENDATION OF THE BOARD OF EXAMINERS</b> .....	i
<b>DECLARATION</b> .....	iii
<b>DEDICATION</b> .....	iv
<b>ACKNOWLEDGEMENT</b> .....	v
<b>TABLE OF CONTENTS</b> .....	vi
<b>LIST OF TABLES</b> .....	viii
<b>LIST OF FIGURES</b> .....	viii
<b>LIST OF ACRONYMS</b> .....	ix
<b>ABSTRACT</b> .....	x
<b>CHAPTER I</b> .....	1
<b>Introduction</b> .....	1
1.1 Background of the study .....	1
1.2 Statement of the problem .....	4
1.3 Objectives of the study.....	6
1.4 Implication of the study .....	6
1.5. The scope of the study .....	7
1.6. Limitations and delimitation of the study of the study .....	7
1.7. Organization of the study.....	7
1.8. Operational definition of key terms .....	7
<b>CHAPTER II</b> .....	9
<b>REVIEW OF RELATED LITERATURE</b> .....	9
2.1 Introduction.....	9
2.2 General concept regarding TVET .....	9
2.3 History of TVET in Cameroon .....	14
2.4 Overview of Cameroon TVET system .....	15
2.5 TVET Qualification Frameworks and Integration in Cameroon .....	17
2.6 Critical Factors for bridging the Gap between Vocational education and Labour market in Cameroon.....	19
<b>CHAPTER III</b> .....	23
<b>METODOLOGY AND PROCEDURE</b> .....	23
3.1 Design of study .....	23
3.2 Sources of data.....	23

3.3 The population of the study, sampling techniques and sample size .....	23
3.4 Data gathering tools .....	24
3.5. Procedures of data collection .....	25
3.6. Pilot test .....	26
3.7. Methods of data analysis.....	26
3.8 Ethical considerations .....	27
<b>CHAPTER IV</b> .....	<b>27</b>
<b>PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA</b> .....	<b>28</b>
4.1 Introduction.....	28
4.2 Demographic data .....	28
4.3 Current practices (extent to which training needs assessment, and admission, and qualification of trainers and availability of training facilities).....	30
4.4 Current practices (admission, qualification of trainers and availability of training facilities)	33
4.5 The extent of training offerings and assessment (extent of linkages between TVET institutions & enterprises, achievement in competence and graduate employability).....	48
4.6 Assessment the Prospects of TVET From Different Perspectives.....	56
<b>CHAPTER V</b> .....	<b>58</b>
<b>SUMMARY, DISCUSSION ON FINDING, CONCLUSION AND RECOMMENDATION</b> .....	<b>58</b>
5.1 Introduction.....	58
5.2 Summary .....	58
5.3 Discussion on The Major Findings .....	61
5.1.1 Current practices (extent to which training needs assessment, and admission, and qualification of trainers and availability of training facilities) .....	61
5.1.2 Findings on current practices related to admission, qualification of trainers and availability of training facilities. ....	61
5.4 Conclusion .....	69
5.5 Recommendations.....	71
5.6 Suggestions .....	72
<b>REFERENCES</b> .....	<b>73</b>
<b>APPENDIX A</b> .....	<b>75</b>
<b>APPENDIX B</b> .....	<b>76</b>
<b>APPENDIX C</b> .....	<b>79</b>



## LIST OF TABLES

Table 2.1 : Types of training and development programs .....	12
Table 2.2: The three broad categories of vocational skills .....	20
Table 2.3: Sectors and constraints regarding workforce availability in Cameroon .....	22
Table 4.2: Students and recent graduates' perception for joining/attending TVET .....	30
Table 4.5 : responses of students to items related to their provision of training. ....	36
Table 4.6: responses of recent graduates to items related to how they rate the relevance of the training program they attended to their locality.....	39
Table 4.7 : Responses of Trainers to Items Related to Their Provision of Training. ....	42
Table 4.8 : Teachers and students' responses regarding training facilities.....	44
Table 4.9 : Relationship between TVET institution and SMEs.....	49
Table 4.10 : Current trainees' perception to the possibility of their future employability. ....	52

## LIST OF FIGURES

Figure 2.1: Cameroon Education system structure .....	16
Figure 2.2 : Structure of VET Cameroon.....	16
Figure 2.3: Three integration model for TVET .....	17
Figure 2.4 : Attempted TVET Qualifications framework in Cameroon.....	18
Figure 2.5 : The three basic skills required for sustainable development of African countries. ..	21
Figure 4.1: Factors for why current trainees and graduates did fewer practical activities in their TVET institution. ....	32
Figure 4.2 : Existence of Basic Facilities in The Institutions .....	48
Figure 4.3 : Key suggestion for TVET prospecting in Cameroon .....	56

## LIST OF ACRONYMS

<b>ADEA</b>	Association for The Development of Education in Africa
<b>AU</b>	African Union
<b>CEP</b>	Primary Study Certificate (Certificat D'études Primaire)
<b>CGPA</b>	Cumulative Grade Point Average
<b>CRTV</b>	Cameroon Radio and Television
<b>ICT</b>	Information and Communication Technology
<b>ILO</b>	International Labour Organization.
<b>MDGs</b>	Millennium Development Goals
<b>MEA</b>	Middle East Africa
<b>MINEDUB</b>	Ministry of Basic Education (Ministère de l'Education de Base)
<b>MINEFOP</b>	Ministry of Employment and Vocational Training (M in i s t è r e d e l'Emploi et la Formation Professionnel)
<b>MINFOPRA</b>	Ministry of Public Service and Administrative Reform (Ministère De La Fonction Publique Et De La Réforme Administrative)
<b>MINESEC</b>	Ministry of Secondary Education (Ministère des Enseignements Secondaires)
<b>MINESUP</b>	Ministry of Higher Education (Ministère De l'Enseignement Supérieur)
<b>NGO</b>	Non-Governmental Organization
<b>NVQF</b>	National Vocational Qualification Framework
<b>OECD</b>	Organization for Economic Development
<b>P = S.V</b>	Significant Value of Chi-Square Test And T-Test
<b>SDG</b>	Sustainable Development Goals
<b>SMEs</b>	Small and Medium-sized Enterprises
<b>SPSS</b>	Social Package Statistics Software
<b>SSA</b>	Sub-Sahara Africa
<b>TVET</b>	Technical and Vocational Education and Training (in French "enseignement techniques et professionnels" ETP)
<b>UNESCO</b>	United Nation Educational Scientific and Cultural Organization.
<b>W.A</b>	Weighted Average.

## ABSTRACT

This research was to investigate on the current practices and future prospects of TVET institutions in the northern Region of Cameroon in practicing the new competency-based training strategy. It well known that the competencies possessed by graduates of TVET institutions is the best ingredient required in the contribution to the social and economic development of that country. Taking cognizant of this fact, the Cameroon government has considered TVET as the key instrument for transforming the country and laid down a new strategy (Cameroon emergence 2035). To this end, the researcher was motivated to conduct a study on the current practices and future prospects of TVET in Cameroon. Thus, the study mainly focuses on finding out the overall practices in pre-service training and training while at current workplace. As a means to investigate more on the issue the study intends to raise question on the relevance of and how need-based training was provided, the conditions in which the training was provided and how the performances of trainees after their graduation from TVET institutions. Specifically, the following thematic areas were included: how needs assessment are conducted at institutional level, the admission processes of trainees, the competencies of trainers and available training facilities, the provision of practical training, the achievement in external examinations, the employment of graduates, the linkages between TVET institutions with business and industry and the prospects of TVET. In order to successfully realize this research work, a descriptive survey design was employed. Three sample TVET institutions from the north region of Cameroon were selected using simple random sampling. From those sampled institutions teachers, current students, recent TVET graduates, the study involved 4 institutions, 123 students who were currently final year trainees, 08 available recent graduate trainees (2012- 2017), 12 teachers/trainers, 4 Principals of TVET institutions, 2 Small and Medium Sized (SMEs) office heads and 01 regional coordinating inspector for TVET were selected as the respondent of the research study. Simple random sampling and purposive sampling techniques were used to select those respondents. Questionnaire, interview, observation and document analysis were used to collect the data. The collected data were tabulated, and analyzed by using the Statistical Package for Social Sciences (SPSS) version 25 to compute percentage, Frequency, weighted average, chi-square test and t-test. The result was interpreted and findings indicated without doubt that there are a lot of efforts concerning TVET assessment mostly regarding the quality of practices during training which for now is dealing with some issues such as materials, tools used for work, number of teachers and their qualification, electric power fluctuations, .the research also revealed that trainers are qualified, very professional and very competent in their respective fields. However, there are a limited number of qualified teachers and trainers, the adjustment of internship program to update the competence is not well implemented. TVET in the North region of Cameroon lacks adequate training facilities. This is characterized by lack of funding and inefficient management system, which have resulted the skills deficiency and mismatch between qualification provided and the labor market demand, and there is only informal relationship between TVET and SMEs. Consequently, it is quite difficult to predict the employment of any graduate nowadays. Based on the result, the researcher recommended that TVET administrators (MINFOPRA, MINESUP and MINSE), etc., should think on how to decentralize TVET assessment needs and curriculum according to the specific context and real needs workforce of each region or locality instead of national one.

## CHAPTER I

### Introduction

Cameroon (French: *Cameroun*), officially the Republic of Cameroon (French: *République du Cameroun*), is a country wedged in West and Central Africa. It is bordered by Nigeria to the west and north; Chad to the northeast; the Central African Republic to the east; and Equatorial Guinea, Gabon and the Republic of the Congo to the south. With a total population of 23,439,189 in 2016 (UN Population Division, 2017), Cameroon is known as “microcosm” of Africa as many cultural diversities over all the Africa can be found in the country. Economically, the country is confronted by a high unemployment rate among youths which represent more than 60 percent of the total population; and low productivity due to the inadequacy of training and low quality in education provision. North region, our study site is 3<sup>rd</sup> largest (66,090 km<sup>2</sup> (25,517 sq. mi)) out of the 10 with population of around 1 687 859 and its capital city is Garoua, which is a 5<sup>th</sup> biggest city in Cameroon with more than 600 000 (see Appendix C for more detail).

### 1.1 Background of the study

Education is the assemblage of all the processes by which an individual develops knowledge, abilities, attitudes and other forms of behaviour which equips him with values which makes him become recognized as a member of the society in which he lives. In the same vein, recognized and important donor organizations have contributed to the meaning of education as (a single most powerful means to improve the quality of life and the most powerful weapon to fight against poverty UNESCO, 1999; the core in preparing individuals to enter the labour force as well as equipping them with the skills needed to engage in lifelong, World Bank, 2008). In a similar note UNESCO (2009) in Hirche (2012); the quality of education should be that which provides the values, knowledge, skills and competencies capable to sustain and individual to live and actively participate and work decently in the society in which he lives.

Accordingly, the general notion from the above writing makes us understand that education is sufficiently important and closely linked with the productive life of society. Consequently, countries should make sure, that their education system should be a reliable process of human resource development and capable of improving the welfare of their citizens in this fast changing

and highly competitive world. In this system of education, technical and vocational education and training (TVET) plays a crucial role in the social and economic development of a nation. In line with this and according to World Bank (2001) states that educational institutions are being asked to prepare young people for the jobs of tomorrow and TVET has an important role to play in this process. Because of TVET's multidisciplinary nature, which also has the potential of linking with the world of work, makes it an important education and training system, which contributes to production of skilled young and adult workforce required in our countries. In supporting this, UNESCO (2004) cited in AU (2007:17) clearly states the high importance of TVET in education as follows: *Since education is considered as the key to effective development strategies, technical and vocational education and training must be the master key that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development.*

In this same vein, the honorable Minister for Education, Ministry of Education, Bangladesh, H.E. Nurul Islam Nahid, MP in 2018 when presenting his speech at a TVET international conference in Dhaka, he expressed the value he has on TVET and considered it as one of the important issues of the country with respect to meeting Bangladesh Sustainable Development Goals (SDG). And at some point, he quoted the following as I may quote: "TVET is the priority of priorities of Bangladesh" end of quote. For many, TVET is a passport to employment and the possibility of social advancement. It is also well known to us that the educational, social, technology and economic imperatives have progressively raised TVET as a priority in all the regions of the world. For example, the Organization for Economic Development (OECD) (2013) describes skills as the new currency of the 21<sup>st</sup> century. The Association for the Development of Education in Africa (ADEA) (2012) called for investment in TVET as a solution to unemployment.

Thus, in this view, UNESCO and ILO, have defined TVET as those "aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life" (UNESCO and ILO, 2001). The 21<sup>st</sup> century has brought forth many demands which can add value to our youths engaged in TVET. These values include information and communication technology (ICT), the increasing emphasis on "softer"

skills – communication, negotiation and the ability to work in a team. This is in line with African Union’s demands to provide relevant TVET programs to both boys and girls being central to the effort to foster sustainable development and attain Millennium Development Goals (MDG) 1 – eradicating extreme poverty and hunger – in Africa”. (African Union, Second Decade of Education for Africa, 2006 – 2015, Draft Plan of Action, June 2006).

TVET is dispensed in public and private educational establishments and in other forms of formal or informal instruction aimed at granting all segments of the society access to life-long learning resources. Traditionally, the so-called “intellectual” work is often contrasted with “manual” work. Thus, there would be, on the one hand, white-collar (office) professions and, on the other, traders, technicians, etc. Nowadays, such a distinction is no longer possible, even though society continues to undervalue and minimize technical education. As a consequence, pupils facing difficulties in their studies are those usually sent to vocational streams. This vision of TVET is attributable to the crisis that Cameroon went through in the eighties. The serious economic and financial crisis that the country faced at the time generated far-reaching changes in the production system and the labor market, and contributed to increasing graduate unemployment. Within that context, the TVET systems found themselves unable to provide the skills required by businesses and industry. With the challenges of increasing costs within the context of structural adjustment programs, TVET systems endured drastic budgetary reductions. Lastly, inadequate investments in TVET contributed to its deterioration and reduced its effectiveness. Yet, the principal objective of TVET is to train youths and adults alike, making them prepared for easily transition into the world of work. With the revolution and innovations in science and technology, the labor market needs have significantly evolved. Cameroon need to meet these new challenges in order to match the new educational demands of TVET. In this regard, many countries in the world are in the process of making reforms to their education system, with a view to training youths to meet national, regional or international market needs.

Today, the global economy offers Cameroon and Africa new opportunities. It also presents Cameroon with the challenges that it cannot ignore. Therefore, Cameroon must break this vicious cycle if the country is to take its rightful place, taking into consideration its enormous potential. Cameroon need to refocus its direction on TVET and rethink on new policy options that would

create new dynamics for TVET in the country. Although TVET also concerns tertiary-level education, the country needs to focus on secondary technical education, which is the locus of middle-level technical workforce training, which is an indispensable resting point to all social and economic development.

## **1.2 Statement of the problem**

Technical and Vocational education is a type of education and training system, which is mainly designed to train youths and adults to acquire knowledge, practical skills, attitudes (competencies) for employment in a particular of occupation or group of occupations or trade (Che Kum, 2010). Similarly, UNESCO (1999) states that Technical and Vocational Education and Training is directly concerned with the acquisition of knowledge and skills required for the world of work. According to African Union (AU) (2007) in complementing the above, stated that one of the most important features of TVET is its orientation towards the world of work and emphasis the role of curriculum in the acquisition of employable skills. In view of this and to further explaining the relation of TVET to quality education, Hirche (2012: 118) stated that “*Quality TVET is relevant education*”.

Recognizing its essential roles of TVET in the social and economic development of a country, much emphasis has been given and efforts have been exerted these days to intensify TVET at different levels more than ever before. Accordingly, AU (2007), in its strategy to revitalize TVET in Africa forwarded the objectives of the strategy, as it is to revitalize, modernize and harmonize TVET in Africa in order to transform it into a mainstream activity for African youth development, youth employment and human capacity building.

With all things being equal, in spite of the attention that the entire world puts unto TVET, the findings from the existing literature on its practices indicate that TVET has had considerable challenges in many countries including Cameroon. On this note and as UNESCO (2009) puts it, in most poor and in many rich countries, the esteem of TVET is generally very low. Parents and learners consider TVET much less attractive than general, academic education. Even a parent who has much interest in TVET would not send his child to TVET institution. Many of the governments often give little attention and resources to TVET institutions and consider it as a place for those who do not have the ability to pursue an academic career. The high cost of attending a TVET institution, the low quality of graduates and the mismatch between training contents to the needs

of business and industry contributes to the poor reputation and image of system of education and training.

In this same vein, according to Atchoarena and Delluc (1999) as cited in World Bank, (2001), African countries have a generally low proportion of technical and vocational education in general secondary education due to the public's attitude towards TVET, which is usually regarded as leading to low-status occupations and consider the attendants as those who have failed in general education. The result is a contradiction between the generally negative image of technical and vocational education and the strategic role it supposed to play in the forward march towards this new age of globalization competitiveness.

It may also be seen that the fact that most TVET graduates do not meet the expectations of business and industry, some of the issues are due to lack of adequate qualified academic staff, the admission criteria and incompetence of students, lack of adequate instructional materials, limited funds, weak linkage between TVET institutions with industries, limited institutional capacity to make tracer studies and lack of harmonization and relevance of curriculum.

However, in the light of considering the situation outlined above, the government of Cameroon has put in place new strategies such as the competence based TVET strategy, which is currently under implementation throughout the country with the assumption that it improves prior challenges with the intension to contribute towards the developmental plan of the country by creating competent and creative workforce, which in its "vision 2035". Therefore, we have initiated to conduct this research titled "*current State of Practices of Cameroon TVET Institutions: case of northern region of Cameroon*" as an attempt to investigate on how well it is currently implemented and what its fate will be as a means to reveal a clear picture of its current situation and recommend improvement for the future. As a means to approach this research study, the following research questions need to be answered:

1. To what extent the TVET programs being delivered are relevant and need based?
2. To what extent the training being offered is up to the standard and ensures the competence needed?
3. to what extent the TVET being delivered secure trainee's job?
4. To what extent TVET institutions linked with local Micro and Small Enterprises?
5. What could be the prospect of TVET from different perspectives?



### **1.3 Objectives of the study**

#### *1.3.1. General objective*

The main objective of the study was to investigate the current practices of TVET institutions in the northern Region of Cameroon in practicing the new competency-based training strategy.

#### **1.3.2. Specific objectives**

Specifically, the study had the following objectives:

- i. To investigate the extent to which training needs assessment is being conducted at institutional level.
- ii. To examine the approach of trainees' admission, trainers' qualification and training facilities.
- iii. To explore the extent of offering practical training and the achievement in competency, assessment and certification.
- iv. To assess the extent of employability of the TVET graduate trainees and the extent of linkage between TVET and SMEs.
- v. To assess the prospects of TVET from different perspectives

### **1.4 Implication of the study**

The problem of education and training nowadays is that of quality to serve needs of the society, particular those of our local communities. The most valuable and important way to alleviate this problem is through effective TVET program. Hence, it is crucial for a country to assess the current practices of its TVET system. In line with this, it is believed that the findings of the research study in view would have the following significance:

1. It may inform Cameroon TVET managements about their implementation gaps in providing demand driven TVET right from the training need identification.
2. It may help trainers of TVET to be aware of their institutional status and initiate them to contribute what is expected from them.
3. It may provide important information to TVET authorities at different level to treat the program as needed.
4. It is also hoped that it would initiate other stakeholders and responsible bodies to take part in the improvement of the implementation.
5. It may also serve as a document for further study.

### **1.5. The scope of the study**

Considering the time limit and resource capacity of the researcher, the study will be carried out in TVET institutions in the north regions of Cameroon. Those institutions will be public institutions, which were established to produce productive youths to meet the country's middle level workforce need. Even though it is a survey study which would attempt to assess the overall situation of trainings in a comprehensively way from input to output, it will focus more on examining some aspect of pre-training, on training and post training practices.

### **1.6. Limitations and delimitation of the study of the study**

Apart of the difficulty faced in reaching most of the recent TVET, graduate trainees, there were also possibilities to not have compiled documents at the institutional level, which created major challenges and limited us in obtaining sufficient information as needed. The study was delimited to only TVET institution in Garoua capital city and its close environs due to the limited time available for the study.

### **1.7. Organization of the study**

The study will comprise five main chapters. The first chapter deals with background of the study, statement of the problem, objectives, implication of the study, limitation, delimitations and operational definition of terms. The second chapter, will presents a review of related literature whereas the third will presents the research design and methodology. The fourth chapter will deal with the presentation of data, its analysis and interpretation. And chapter five will relate to the summary, discussions, conclusions and recommendations of the study.

### **1.8. Operational definition of key terms**

- Technical and Vocational Education: Educational process involving in addition to general education, the study of technology and related science and the acquisition of practical skills and knowledge relating to occupation in various sectors of economic and social life.
- Competence: is a broad concept comprising, the possession and application of a set of skills, knowledge and attitudes necessary to successfully compete for jobs in the labor market.

- Educational facilities: Training equipment available for both theoretical and practical demonstrations in TVET institutions to ensure the quality of training being offered; such as training manuals, workshops tools, equipment, machineries, etc.
- Enterprise: Organized business activities aimed specially at growth and profit. In our case, it defines micro and medium sized enterprises that engaged in organizing trainees for employment.

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

Chapter one presents a general introduction, background of the study, problems, objectives and limitations of the study. It concludes by indicating the outline of the entire thesis. The current chapter presents review of related literature pertaining to this study under the following subheadings:

- General concept regarding Technical and Vocational Education and Training (TVET)
- History of TVET in Cameroon
- Overview of TVET in Cameroon
- TVET qualification frameworks and integration in Cameroon
- Examine the critical factors for bridging the gap between vocational education and labour market in Africa and particularly in Cameroon

#### **2.2 General concept regarding TVET**

TVET has been considered as a powerful and indispensable weapon to fight against poverty and youth unemployment all over the world. The governments of most of the developed, developing and poor countries have laid TVET as a priority in their challenge programs. For example, and in particular the Chinese government have since considered TVET as a pillar and remains a pillar which has propelled the country to become a developed country and now stands almost at the first place in the world. In the others words, TVET is understood as comprising education, training and skills development relating to a wide range of occupational fields, production, services and livelihoods.

The TVET concept has been described by many researchers in several research and studies, they consider Skills and knowledge as the engines of economic growth and social development of any nation (Goel, 2010), and that TVET holds the key to training the skilled and entrepreneurial workforce needed for the changing technological workforce (Afeti, 2010). Before that, UNESCO in 2002 had set up the main concept of TVET, and according to them, TVET is used as a comprehensive term referring to those aspects of the educational process involving in addition to general education, the study of technologies and related sciences, and the acquisition of practical skill, attitudes, understanding and knowledge relating to occupations in various sectors of

economic and social life (UNESCO, 2002). In the same vein, Mclean and David (2009) wrote that, TVET is concerned with the acquisition of knowledge and skills for the world of work to increase opportunities for productive empowerment and socio-economic development in knowledge economics and rapidly changing work environment. In addition, during the international conference of UNESCO in 2015, based on the revised recommendation of 2011 concerning TVET, it had clearly recalled that, TVET, as part of lifelong learning, can take place at secondary, post-secondary and tertiary levels and Non-academic technical education and practical training (learners of trades or crafts) working in different sectors of industry and includes work-based learning and continuing training and professional development which may lead to qualifications. TVET includes a wide range of skills development opportunities attuned to national and local contexts. Learning to learn, the development of literacy and numeracy skills, transversal skills and citizenship skills are integral components of TVET. In conclusion, we can strongly say, according to the above studies that, TVET connects education and the world of work. It aims at addressing economic, social and environmental demands by helping youths and adults develop the skills needed for employment, decent work and entrepreneurship. In this way, TVET promotes equitable, inclusive and sustainable economic growth and supports transitions to green and digital economies.

### **2.2.1: EDUCATION AS CONCEPT**

Education transforms lives and it is the main catalyst to build peace, eradicate poverty and drive sustainable development on the whole world. Thanks to education, life is changing positively, with people more civilized, conscious, have working skills and knowledge. The main NGO for education, UNESCO, believes that education is a human right for all throughout life and that access must be matched by quality (UNESCO, 2017). We are seeing over the whole world the most important role education plays against conflict, war and terrorism, and the reality is that, all these threats most of them take place always in the area or countries where there is lack or less level of education, and most of the people are unconscious, uneducated or ignorant, such as African countries, Middle East and Asia. As a typical case, we can enumerate the terrorism activities in Pakistan due to the less level of education and mostly regarding the girls. That was claimed by Malala Yousafzai and she said, “Let us pick up our books and our pens,” “They are our most powerful weapons. One child, one teacher, one book and one pen can change the world.” (Malala,

2017). She believes that only education can stop terrorism in Pakistan definitely and in whole world, and she put education as a first way to think about solution.

### **2.2.2 TRAINING AS CONCEPT**

We can define Training as a development of awareness, skill, knowledge and attitude competencies through instruction, teaching, or practice. It is a learning process that seeks to bring about permanent improvement in the ability and behavior of trainees by enabling them to learn new skills, knowledge, attitude and behavior. Training in a general sense refers to a planned effort by an organization to facilitate employees in acquiring skill, attitude and behavior that are critical for successful performance on the job. Every human activity needs up-to-date knowledge and required skills to perform it as well as, improvement in skills increases versatility and adaptability of employees of any organization or factory that leads to required performance level in the current job and mostly, no company or industry can survive without training and development of employees. Before the industrialization century, training was provided by apprenticeship system to unskilled workers in the sense to master arts and crafts industry, but soon, at the beginning of the industrial age, the ancient approach of training had undergone a dramatic transformation since, vocational education and training had emerged to replace the traditional apprentice system.

Today, with constantly fast changes in the field of technologies (electronics and ICT), skills are upgraded regularly, new skills are also created, and consequently, jobs are becoming more complex and for this training is very important for jobseekers, training for performance, training for improvement and training for development.

Many authors have given various definitions regarding training concept in their different studies, and we can recall some of them. Michael Armstrong (2001), defined training as “The systematic development of the knowledge, skills and attitudes required by an individual to perform adequately a given task or job”. In the Glossary of Training Terms (Manpower Services Commission, U.K., 2009) training is defined as "a planned process to modify attitude, knowledge or skill behavior through learning experience to achieve effective performance in an activity or range of activities. Its purpose in the work situation is to develop the abilities of the individual and to satisfy current and future manpower needs of the organization". For Aswathappa, K (2000), the term ‘training’ indicates the process involved in improving the aptitudes, skills and abilities of the employees to perform specific jobs. Training helps in updating old talents and developing new ones. ‘Successful

candidates placed on the jobs need training to perform their duties effectively’. Goldstein & Ford (2002) in their study “Training in organization: needs assessment, development and evaluation” had defined Training as the systematic acquisition of skills, rules, concepts or attitudes that results in improved performance in another environment.

**Table 2.1 : Types of training and development programs**

<b>Types</b>	<b>Goals</b>
<b>Technical training</b>	Seeks to impart technical knowledge and skills using common training methods for instruction of technical concepts, factual information, and procedures, as well as technical processes and principles.
<b>Sales training</b>	Concentrates on the education and training of individuals to communicate with customers in a persuasive manner and inculcate other skills useful for sales positions.
<b>Communications training</b>	Concentrates on the improvement of interpersonal communication skills, including writing, oral presentation, listening, and reading. In order to be successful, any form of communications training should be focused on the basic improvement of skills

(Source: Garry Dressler, 1999)

### **2.2.3 TECHNICAL EDUCATION AS CONCEPT**

Technical education is a term applied to schools, institutions, and educational programs that specialize in the skilled trades, applied sciences, modern technologies. It is the training of engineers and technicians for work in industry, construction, transportation, communications, agriculture, and forestry. The concept “technical education” is also understood to include the theoretical and practical scientific knowledge and skills that permit a person receiving such education to solve production engineering and economic problems in his specialty. Briefly, Technical education is an academic and vocational preparation of students for jobs involving applied science and modern technology. It emphasizes the understanding and practical application of basic principles of science and mathematics, rather than the attainment of proficiency in manual skills that is properly the concern of vocational education .Technical education has as its objectives the preparation of graduates for occupations that are classed above the skilled crafts but below the

scientific or engineering professions. People so employed are frequently called technicians. Technical education is distinct from professional education, which places major emphasis upon the theories, understanding, and principles of a wide body of subject matter designed to equip the graduate to practice authoritatively in such fields as science, engineering, law, or medicine. (Source: The Editors of Encyclopedia Britannica, 1998), the same concept of the term “technical education” has been written in others words by various researchers. Huxley (1895:405, 437) defines technical education as the teaching of handicrafts or trades. A brilliant historian of South African education, McKerron noted in 1934 that “...in technical education more emphasis is laid on the intellectual aspect, on the scientific theory, which is necessary for the proper understanding of the arts and crafts. In its highest form technical education demands superior intelligence on the part of the dedicand and includes education for such professions as engineering and other vocational work which may fall within the scope of the university... Industrial education aims rather at imparting skill in some particular handicraft” (McKerron, 1934:101). Similarly, Bennett (1937) declared that technical education is applied to general science, engineering, commercial and management studies. In addition, Williams (1963:92) argues that technical education is practical, in contrast to university education, which is by implication more theoretical or academic. (I think you may also include recent literature on this sub-subject).

#### **2.2.4 VOCATIONAL EDUCATION AS CONCEPT**

One of the main characteristics of vocational education is how the teaching and learning relate to the workplace or is contextualized in the selected area of work or occupation.

Vocational education is designed for learners to acquire the knowledge, skills and competencies specific to a particular occupation, trade, or class of occupations or trades. Vocational education and training (VET) is essentially mainly concerned with ‘applied learning’: that is, with the acquisition of knowledge, skills, values and ethics appropriate for the world of work to increase opportunities for productive work, sustainable livelihoods, personal empowerment and socio-economic development (Jayaram, Munge, Adamson, Sorrell, & Jain, 2017, p. 24 ). The concept of VET is not always seen in the same angle over the world. In 2007, Clarke winch noted that for Anglo-Saxon system, VET is restricted to preparing trainees for working life, a process often regarded as of a rather technical and practical nature. Therefore, here, VET is concerned with both civic and academic achievement. In most Anglo-Saxon countries, vocational education is



considered as training for particular jobs in order to serve the needs of current employers. However, Dutch VET system presented in the same year 2007 by Westerhuis, focus only on civic education purposes and seen as a productivity in good services for country. And whereas, in Netherlands, VET is not about practical training alone, but about personal development and rising above the narrow confines of a trade. Consequence, the concept varied according to each system. Now let's find out what, those literature have pointed out about this concept. In 2007 Clark and Winch, noted that the aim of VET is to improve the productive capacity of society on the assumption that the greater the effort and investment put into this, the more productive the labor. For the individual, VET is about preparation for working life and about entering into and progressing in the labour market. The employer, on the other hand, has more immediate concerns regarding vocational education as a means of skilling labour to meet the immediate needs of the particular firm. These are conflicting interests and, as a result, the VET system represents a compromise, reflecting the power attached to each of these different interests. In the same study, they had mentioned that, vocational education and training as social development of labour, nurturing, advancing and reproducing particular qualities of labor to improve the productive capacity of society. (Vocational type of education (Clark & Winch, 2007). I don't really understand this statement because it is incomplete. Could you please clarify it to me?)!!! In 2008, Moodie considered VET as the development and application of knowledge and skills for middle level occupations needed by society from time to time. Vocational education is thus closely engaged with industry and the economy and changes as industries change, whilst higher education is engaged more closely with academic disciplines and changes as the disciplines change (Moodie, 2008).

### **2.3 History of TVET in Cameroon**

Just after the decolonization process, some newly independent sub-Saharan African countries attempted curricular transformation that might produce a skilled workforce through widespread access to versions of TVET. They believed that Technical and vocational education (TVE) can influence development and economic progress for post-colonial societies. But for Cameroon in particular, technical or vocational educational had been neglected and was not considered a priority in formal colonial schooling structures, consequently, TVET had a slow start and developed less quickly than literary education, which was pioneered by voluntary agencies. In British Cameroon,

the education system was heavily influenced by various Christian mission schools, whose primary focus was to spread religious ideas whereas in the francophone region, the primary focus of education was preparation of administrators, who could fill the needs of the French government. To illustrate this situation, some Cameroonian authors Ihims, Jacob and Atayo had written in their books respectively,” ...As Cameroon became independent in 1960, there were only five full-fledged secondary grammar schools and one technical secondary school in all of Cameroon” (Ihims, 2003). “There were several apprenticeship centers and handicraft workshops, but post-primary education was not available for most Cameroonians. Currently there are around 500 general secondary schools in Cameroon, but still relatively few technical and vocational high schools and colleges” (Atayo, 2000).

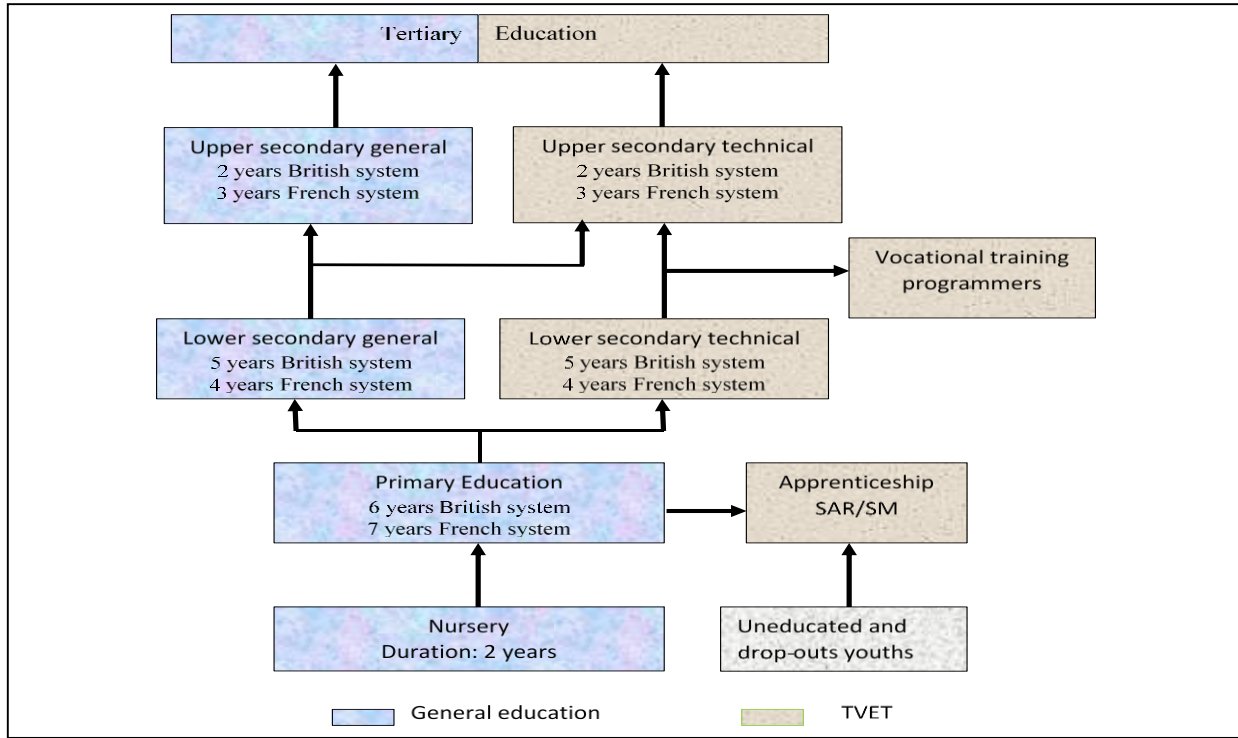
To overcome the current situation, in 2008 the ministry of employment and vocational education “MINEFOPRA” had defined a new Strategy to improve the vocational education programs. The strategy defines vocational education as the attaining of professional training qualifications in extracurricular training centers, non-formal learning environments as well as vocational training programs, for example apprenticeships (MINFOPRA, 2008)

#### **2.4 Overview of Cameroon TVET system**

Technical and vocational education (TVE) in Cameroon known by its (French acronym) as “l’enseignement techniques et professionnelles (ETP)”, aims to create a trained workforce for various employment sectors and increase understanding of technology. TVET programs also intend to allow individuals to fully participate in society as responsible citizens (World Bank, 2015). Thus, the purposes of technical educational settings in Cameroon include providing a trained workforce for various employment sectors, to increase understanding of technology, and to prepare people who might be able to solve the environmental problems Cameroon is facing.

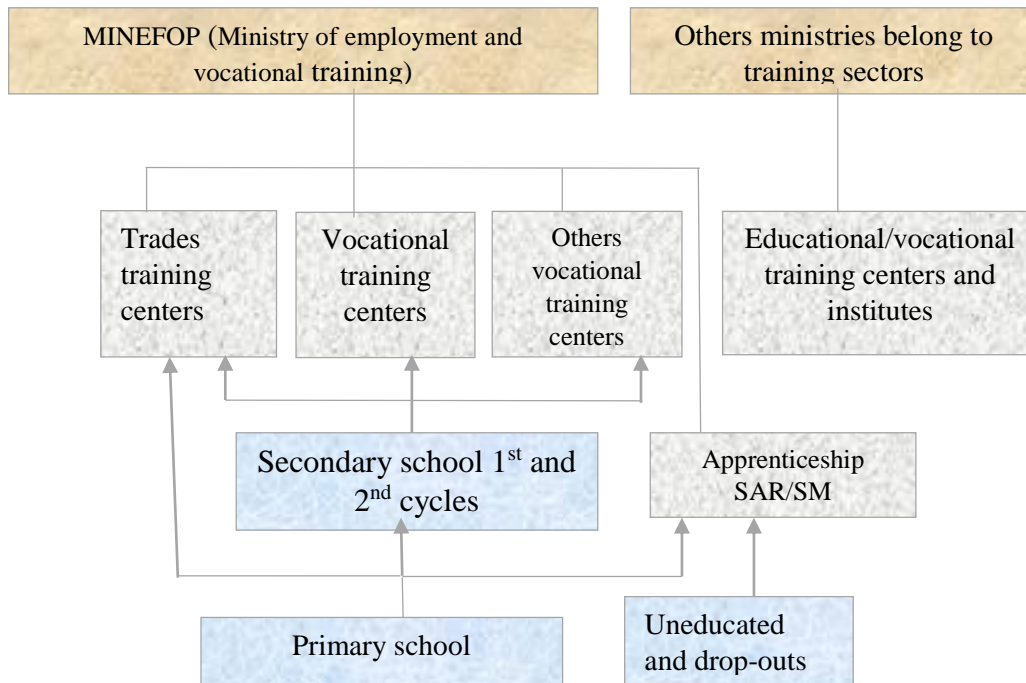
The education system in Cameroon has two sub-systems, the British and French sub-system, and the languages of instruction are accordingly English and French. While, the same TVET programs are offered in English and French the graduates have access to higher professional training courses at undergraduate and postgraduate levels respectively. The following figure shows the global Cameroon education system both General and TVET:

**Figure 2.1: Cameroon Education system structure**



Source modified (World TVET Database, 2015)

**Figure 2.2 : Structure of VET Cameroon**



(World Bank, 2010)

The current Cameroon technical and vocational education is under the supervision of MINEFOP (Ministry of Employment and Vocational Training): is a main responsible for vocational training for all school leavers.

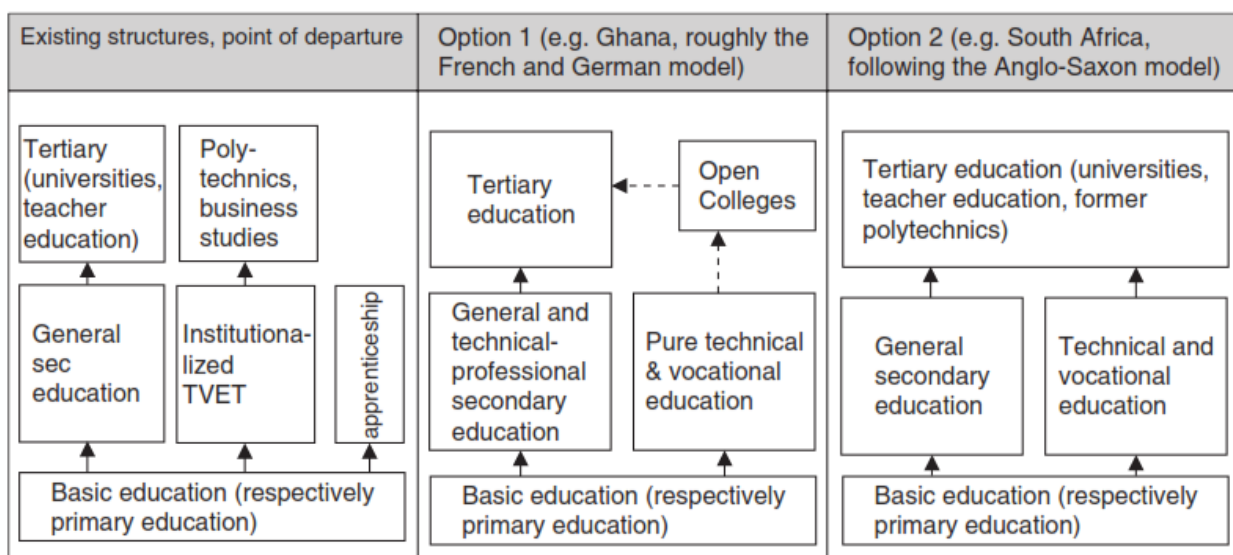
- ✓ MINESEC (Ministry of Secondary Education): is responsible for general and technical secondary education.
- ✓ MINESUP (Ministry of Higher Education): is responsible for University and professional higher education.
- ✓ And also, the ministry of public works and ministries of Agriculture

Source: (Mvuh Zouliatou, 2017):

## 2.5 TVET Qualification Frameworks and Integration in Cameroon

Cameroon as many Sub-Saharan Africa (SSA) such as Botswana, Ghana and Tanzania are in the process of establishing a National Vocational Qualification Framework (NVQF) for its scope of integration. In contrast of South Africa scope of TVET integration (option 2 in figure), Cameroon TVET follows the model of German and Francophone practices (option 1 in figure). This model attempt to differentiate curricula and institutions of TVET and of general education as a dual system. The following figure present the difference models to integrate TVET.

**Figure 2.3: three-integration model for TVET**



(Source: world Bank, 2008)

## The Qualification Framework in Cameroon

Qualification framework in Cameroon is still not developed or not official. Certificate of Primary Studies (CEP) marks the first exit point. The examination is delivered and certified by the Ministry of Basic Education (MINEDUB). Baccalaureate or equivalent diplomas opens the door for higher studies to the successful graduates who complete various courses offered at senior secondary schools that offer both academic education and institutionalized technical and vocational education. Graduates of all of the aforementioned streams qualify for tertiary education, although in different areas. Industry-based apprenticeship courses are alternative routes for CEP graduates (although not qualifying for tertiary). Primary school dropouts, unsuccessful CEP candidates, and CEP candidates unsuccessful for either secondary schooling or apprenticeship are left with pre-vocational skills.

**Figure 2.4 : Attempted TVET Qualifications framework in Cameroon**

School grades	Education cycle	Education providers
	Tertiary	University/ Polytechnic/ Technical University/ Professional Institutes/ College of Education/ Teacher Education
Second exit point: Transition requirement Senior Secondary School Examination Certificate		
12	Secondary education	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 5px;">Specialisation in Grammar (academic)/ Technical/ Agricultural/ Vocational programme. Same minimum level of exit skills for E, M, S. Secondary qualification.</div> <div style="border: 1px solid black; padding: 5px;">Apprenticeship/ skills training. National craft and business certificates.</div> </div>
First exit point: Transition requirement Basic Examination Certificate in Education		
9	Basic education	Basic education (6 years primary, plus 3 years junior secondary): general curriculum for basic literacy, numeracy, science, and social studies. BECE.

(Source: world Bank, 2008)

## PROBLEMS OF TVET IN CAMEROON

According to Atayo (2000), technical and vocational education in Cameroon is confronting similar issues as general education: lack of adequate resources, including material infrastructure, trained teachers, and financial sponsors. In addition, there is a big skills gap or mismatch between training delivered and the labor market needs, gender disparity, and mostly a low efficiency in management are the main problems confronted by the TVET system in Cameroon. These problems had also been pointed out by some NGOs; The World Bank research shows that TVET in Cameroon does

not adequately provide the qualification required by the world of work. Pointers to the mismatch include a general lack of practical training elements in courses, and the low involvement of the private sector in TVET training as well (World Bank, 2015). This disconnection is a major reason for the high youth unemployment. In case of managerial system, TVET in Cameroun is dominated by a lack of transparency in finance, teacher recruitment, and political interference. “Transparency International” had revealed that issue in 2016. Cameroun has been identified as having one of the highest reports of “petty misuse of funds” and the country is ranked 145/176 on the developing countries corruption index.

## **2.6 Critical Factors for bridging the Gap between Vocational education and Labour market in Cameroon.**

The critical factors that are need to bridge the gap between vocational education and labour market is the creation of a strong link between Vocational Education (VE) and labour market globally. A substantial amount of study has been reported about this type of relationship (Agrawal & Agrawal, 2017; Weßling, Hartung, & Hillmert, 2015). It is now well known and well reported in the literature that VE produced skilled manpower, which will reduce the unemployment rate of any country in the world. The skill mismatch is also found in the literature despite having strong relationship between VE and labour market demand (David & Nordman, 2017). Many scholars in the area of VE have written lots about bridging the gap between VE and labour market in different parts of the world emphasizing on the critical factors that are responsible. Therefore, skill mismatch is an imperative issue, which needs to be discussed in this section. The overall economic development all over the world depends on the teeming youth, who are well skilled, competent and professionally capable in different areas of specialization. This review is aimed at finding those critical factors that could be responsible for bridging the gap between VE and labour market. In the literature, different studies identified vocational skills (the skills that are linked with employment) in diverse nature. For instance, Jayaram and Engmann (2017) identified three broad categories of vocational skills:

- a) Technical skills
- b) Cognitive skills,
- c) Non-cognitive or soft skills

Some other studies reported skills in another names. For example Rus, Yasin, and Rasul (2014) considered skills as “Employability skills” that is essential abilities having combination of

knowledge, skills and attitudes that are required for 21<sup>st</sup> century workplace. They further identified them as: Individual skills (communication skills, respect, computer skills and cultural skills), Skills covering individual reliability (individual management, ethical, and vocational maturity) Economic skills (problem-solving skills, learning skills, employability and career development skills). Group and organizational effectiveness (interpersonal skills, organizational skills, negotiation skills, creativity, and leadership). (Rus et al., 2014, p. 2)

However, the required skills that are discussed in the literature for the 21<sup>st</sup> century are not widely dispersed. Different studies may name them differently but in a broader perspective, most of the skills are linked and connected. Therefore, this study proposes three broad skills, which are likewise of recent study of Jayaram and Engmann (2017); Jayaram et al. (2017):

**Table 2.2: The three broad categories of vocational skills**

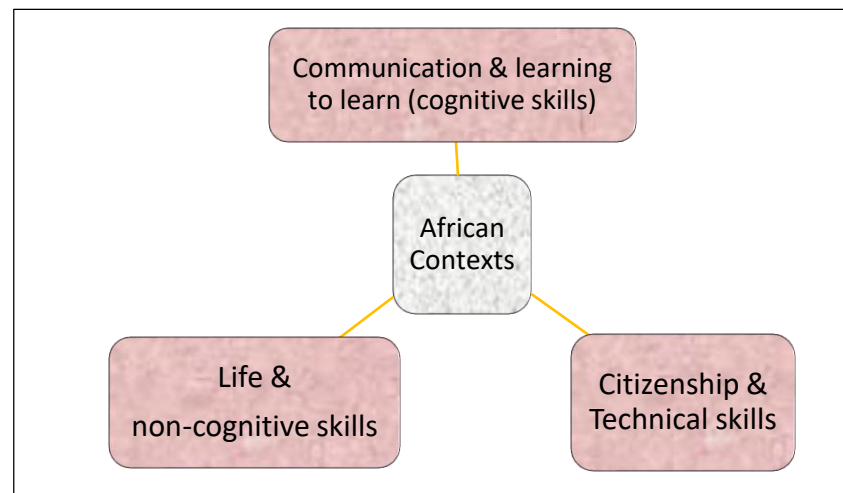
<b>Technical skills</b>	Technical skill is that ability which is linked with specific task performance. Apprentices should have ability to perform specialized tasks or carry out a job linking with labor market (technical role/operating a tool).
Cognitive skills	Cognitive skill is that which is linked with brain (knowledge). Apprentices should have ability to understand complex ideas, recall the facts, solve abstract problems, and overcome difficulties by thinking and so on.
Non-cognitive or soft skills	Non-cognitive skill is that which is linked with behavior (human life). Apprentices should have ability to deal with multiple factors, which are not connected with other two skills. It is combination of having multiple traits such as leadership, communication, emotional and other behavior related attitudes.

### **Skill gap in Africa**

A very recent study (e.g., Jayaram & Engmann, 2017) reported there are three basic skills which are required for sustainable development of African countries. It includes communication and “learning to learn” skills. It also encompasses numeracy, literacy, and other cognitive skills. (ii) Young people should have social and citizenship skills that is, youth workers need to have ability to cooperate with others, cope with conflicts, and technical skills for being able to operate their tasks in the workplace. (iii) It includes soft skills, individual development skills, and ability to

contribute to a Pan-African identity.

**Figure 2.5 : The three basic skills required for sustainable development of African countries.**



Some examples from country in Africa are worth to mention here to clarify the overall scenario (African Context). First, in Senegal, two types of enterprises such as SMEs (Small and medium enterprises) and LEs (larger enterprises) require different skills. For instance, former one focus more on cognitive skills whereas later emphasize towards both cognitive and non-cognitive skills. Both *non-cognitive* such as drive to work, discipline, motivation and *cognitive skills* such as reading and writing, are prioritized in Burkina Faso. On the other hand, in both Uganda and Burkina technical skills are seen important in sectors like construction and finance (source: Jayaram & Engmann, 2017).

### **Skill gap: Case of Cameroon**

In Cameroon, employers in both the formal and the informal sector require the following skills:

- basic cognitive skills,
- advanced skills: thinking and problem-solving),
- social or citizenship skills,
- non-cognitive skills,
- technical skills and,
- Transferable skills: Ability to apply present or academic skills to solve a new situation...

For examples, many studies depicted that for potential employees in Cameroon, prior is going to technical and vocational kills in the field of carpentry, masonry, electricity, plumbing, painting,



and roofing whereas, system management and transformation involves the employees from higher level of education with backgrounds in engineering (civil, mechanical, sanitation, water, plumbing, electrical), technology (computer-aided design, or CAD), and computer-aided management (CAM). (source: *Project CM, 2003*) . The table below, summaries the suitable skills need and existence in differences field in Cameroon.

**Table 2.3: Sectors and constrains regarding workforce availability in Cameroon**

Constraints		Infrastructure	Wood	Ag/Agr ibus	cotto n	Palm oil	Tourism	Technology
<b>Job-relevant skills constraints</b>	Insufficient basic skills				X			X
	Technical skills mismatch	X	XXX	X	X	XXX		X
	Behavioral skills mismatch							
	Insufficient entrepreneurial skills	X						X
<b>Lack of labor demand</b>	Slow job-growth economy	X	X				X	X
	Employer discrimination					X		
<b>Job search constraints</b>	Job matching				X			X
	Signaling competencies							X
<b>Firm start-up constraints</b>	Lack of access to financial or social capital					XX	X	X
<b>Social constraints on the supply side</b>	Excluded-group constraints (ethnicity, gendered.)			X				X

(Source: world Bank, 2010)

Table above, illustrates clearly that, there a significant gap between labor markets in Cameroon. Similar as other African's countries, TVET Cameroon is characterized by the Poor Linkage with the Labor-Market due to the quality of practices, materials and resources presented by Atayo in 2000.

## CHAPTER III

### METODOLOGY AND PROCEDURE

#### **3.1 Design of study**

This chapter presents and describes the current practices and prospects of TVET in selected institutions of the North region of Cameroon. Descriptive survey method was employed in the study. We selected this method because it is helpful when we need to show situations, as they currently exist (Gay, 2000). This method is also used because it is economical, since it enables us to describe the prevailing situations both quantitatively as well as qualitatively which eventually help us draw valid general conclusion.

#### **3.2 Sources of data**

Both primary and secondary sources of data were consulted. The primary sources were Principals of TVET institutions, trainers, trainees/students (both those on training currently and recent graduates), Heads of SMEs, heads and regional pedagogic coordinating inspector of TVET. The secondary sources, however, were such documents as tracer study results, training guides, trainers and trainees' profile, reports and others.

#### **3.3 The population of the study, sampling techniques and sample size**

The northern region is one of 10 regions of Cameroon. It comprises 17 public TVET institutions. Among these seven public TVET institutions, the study involved 4 institutions that had a total population of 150 respondents (123 students, current year trainees, 08 available recent graduate trainees (2012- 2017), 12 teachers/trainers, 4 Principals, 2 SMEs office heads and 1 regional coordinating inspector for TVET). These four sampled institutions comprised 75% of the total size and consequently, felt well representative. The sample institutions were selected using random sampling method with the assumption that it gives equal chance for each institution to be chosen. The reason behind this is the institutions had similar objectives in which their accreditation is by delegated TVET authorities and in consideration of the capability to

implement TVET programs and serve the target population in accordance with defined national occupational standard based on national accreditation rules and procedures.

### **3.4 Data gathering tools**

#### ***Questionnaire***

Questionnaires were used as the basic tool in the study to obtain information from the teachers/trainers and trainees/students with the assumption that it would enable to get sufficient information from a large number of respondents in a relatively short time and with minimum cost. In order to extract respondents' views on training need assessment and relevance of training, trainees' admission approach, status of training provision, trainees' employability and links of training to SMEs office both close and open-ended question items were prepared. The closed ended items were prepared in both 5 and 3-point scales and multiple choices like Yes or No form whereas open ended items were included to give the opportunity for respondents to express more about the issue in their own words. Questionnaires were originally written in English but for convenient of use, they were translated and administered in French for both trainers/teachers and trainees and later again translated into English because the language of instruction in the north region of Cameroon is the French language. The entire questionnaire consisted of two parts, i.e. the background as well as detail question items.

#### ***Interview***

In order to acquire more in-depth information that may not be easily obtained through a questionnaire, semi structured interview was used with focus on training need identification at institutional levels, way of admitting trainees, trainers' competence, training facility, practices, trainees' employment, and the extent of the link between training and SMEs and others. It was conducted with Principals, SMEs office heads and regional coordinating pedagogic inspector of TVET. The interview guides were prepared in English but presented in French (as necessary) for all the groups to lessen the communication barrier. Notes were taken in French and later translated to English for analysis.

#### ***Document Analysis***

For further information, document like tracer study, trainees'/students' admission profile, trainer's/teachers' profile and document on collaborative work with surrounding SMEs office were assessed with the structured checklist.

### ***Observation***

Beside the above tools, observation of the real training facilities like the sufficiency of workshop rooms, workshop materials, status of practical training and overall institutional situation like conduciveness of the campus was conducted using a structured observation checklist.

### **3.5. Procedures of data collection**

To answer the research questions raised, the researcher had gone through a series of data gathering procedures. Accordingly, first of all, the intended questionnaires, interview, document analysis as well as observation check lists were prepared and then evaluated and commented by the study advisors and 2 experts (teachers) of TVE department before actual use. After having done this, the researcher collected official letter of authorization from the Head, TVE department, Islamic University of Technology (IUT) to facilitate in approaching the authorized bodies. The researcher then went to each group of respondents and introduced objectives and purpose of the study. The researcher assigned a person and provided orientation for him to facilitate the data gathering process.

*Questionnaires* were administered to sample trainers/teachers and trainees/students within the given schedule by the facilitator under close supervision of the principal researcher. Finally, the data gathered through different instrument were checked by the researcher himself based on his own checklist.

***Table 3.1: Five (5) point-scale***

<b>Scale</b>	<b>points</b>
Strongly Agree (SA)/Very High (VH)	5
Agree (A)/High (H)	4
Undecided (U)/ Unknown	3
Disagree (D)/Low (L)	2
Strongly Disagree (SD) /Very Low (VL)	1

**Table 3.2: Three (3) point-scale**

<b>Scale</b>	<b>points</b>
Sufficient Enough	3
Moderate	2
Not Sufficient	1

### **3.6. Pilot test**

A pilot test was conducted prior to the utilization of the prepared instruments for final data gathering especially for questionnaire. The purpose of this pilot test was to alter the instrument accordingly if there was any defect and secure the validity and reliability. In order to check the face and content validities the instruments were submitted to and commented by advisors and some colleagues. Based on comments, different lengthy items were shortened and many unclear items were made clear. In addition, for reliability check, questionnaires were commented by advisors and were modified and tried out at a TVET institution. Hence, these questionnaires were distributed for trainers and current trainees respectively using simple random sampling. Simultaneously, questionnaires were also administered to recent graduate trainees of the study area with snowball method and finally checked by Cronbach's Alpha model for the items in the 5-point and 3-point scales form and for items in Yes/No form with the help of a statistician. Thus, the average reliability coefficient result found for the items in the 5 and 3-point scale form was 0.80 and 0.877 for those in Yes/ No form, which indicated that the instrument was reliable.

### **3.7. Methods of data analysis**

The data collected through the aforementioned instruments were categorized and organized by theme according to their conceptual similarity. Both the quantitative and qualitative data were analyzed and then described or narrated based on the methods best suited to their nature. Accordingly, the quantitative data were analyzed using descriptive statistics like frequency count and percentage to describe the extent of various responses on the issue raised. The SPSS 25 computer program was used. The handwritten notes collected through the semi structured interview, open ended question items, observation and the document analyses were transcribed;

categorized and compiled together into themes and summary sheets and then analyzed and interpreted with word expression and narration.

**Table 3.3: Weighted Average and its Interpretation for Five point-scale**

<b>Weighted Average</b>	<b>Weighted Average Interpretation</b>
$W.A \geq 4.5$	Strongly Agree <b>SA</b> /Very High <b>VH</b> (5)
$4.5 > W.A \geq 3.5$	Agree <b>A</b> /High <b>H</b> (4)
$3.5 > W.A \geq 2.5$	Undecided <b>U</b> /Unknown <b>U</b> (3)
$2.5 > W.A \geq 1.5$	Disagree <b>D</b> /Low <b>L</b> (2)
$1.5 > W.A$	Strongly Disagree <b>SD</b> /Very Low <b>VL</b> (1)

**Table 3.4: Weighted Average and its Interpretation for three point-scale**

<b>Weighted Average</b>	<b>Weighted Average Interpretation</b>
$W.A \geq 2.5$	Sufficient Enough (3)
$2.5 > W.A \geq 1.5$	Moderate (2)
$1.5 > W.A$	Not Sufficient (1)

Chi square and t-test was used as a test of significant when data are expressed in frequencies or percentage to verify the opinion of the respondents yielded by W.A.

### **3.8 Ethical considerations**

Since the aim of the study was for the improvement of the issue under the study, it's all process accomplished at the participants voluntarily consent without harming and threatening their personal and institutional wellbeing. Thus, all communication with institutions and participants undertake with open and honest way (in an overt research way) in considering the research ethical codes issues like anonymity (not the use of any names and address in the final report) and confidentiality (not disclose directly any information to the third party)

## CHAPTER IV

### PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

#### 4.1 Introduction

This chapter presents the analysis and interpretation of data collected from respondents. The groups under study were current trainees/students, recent graduate trainees/students, trainers/teachers, Principals of TVET institutions, Heads of Small and Medium Enterprises and Regional coordinating Inspector of TVET. Thus, the data from current trainees/students, recent graduate trainees/students and trainers/teachers were collected through questionnaires, while those from other groups were obtained through interviews. Furthermore, observation and document analysis were conducted to gather additional information.

Percentage, weighted average, chi square test and t-test, were used in interpreting the opinions of the respondents regarding the extent to which training needs assessment is being conducted; current practices (admission, qualification of trainers and availability of training facilities); the extent of training offerings and assessment (extent of linkages between TVET institutions & enterprises, achievement in competence and graduate employability). Suggestions from participants concerning the prospects of TVET from different perspectives have also been presented.

#### 4.2 Demographic data

Data was collected from 150 respondents drawn by stratified random sampling and Purposive selection from four (04) Government approved TVET institutions and two SEMs in Garoua North region of Cameroon and its environs. The sampled students, teachers, recent graduated and administrators were presented in terms of demographics of respondents, highlighting the four different groups of respondents., recent graduates, teachers and administrators (principals/Heads of TVET; Regional coordinating inspector for TVET; and chiefs of SMEs).

**Table 4.1: shows the demographic data according to gender.**

Gender	STUDENTS		RECENT GRADUATED		TEACHERS		ADMINISTRATORS	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
<b>Female</b>	74	60.2%	2	25%	3	25%	00	0
<b>Male</b>	49	39.8%	6	75%	9	75%	7	100%
<b>Total</b>	123	100%	8	100%	12	100%	7	100%
<b>Total</b>	150							

**Table 4.1** depicts that 60.2 % of the respondents are female and 39.8 % male. Accordingly, this gives us an impression that there are more female students than male in TVET institutions in the North region of Cameroon than male students, which in practice does not reflect the actual situation. The outcome of this result may be due to the fact that during the data collection period of this research, only few specialties where female students are mostly involved were on campus. A greater majority of male students from majority of the specialties such as electrical, electronics, building and construction, mechanical, etc., and from majority of the institutions were out on their internship programs during that period; hence, the outcome of the research may not represent the actual situation. Data from both recent graduates and teachers shows that there were only 25% females in each case. Moreover, no female was found as administrator. These cases demonstrate that, females are fewer than male in TVET institutions in Cameroon or it may perhaps be that they dropped out earlier at the lower levels or medium levels of their studies in TVET institutions. In fact, it can be said that, females are no more interested or encouraged to join TVET institutions in the North region of Cameroon. Additionally, it might be due to the fact that gender equality is not considered during the appointment of TVET administrators.



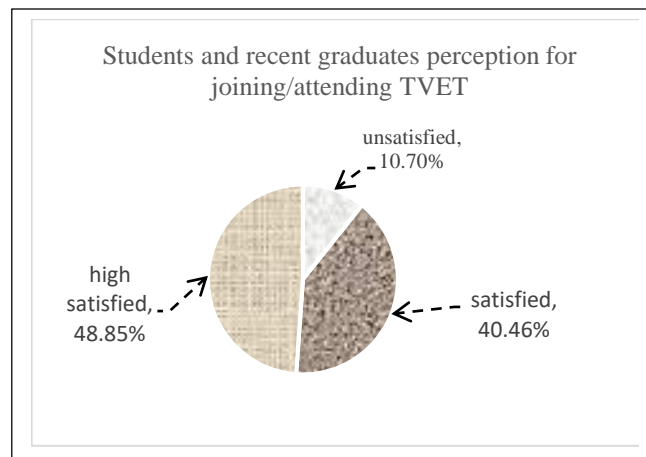
### 4.3 Current practices (extent to which training needs assessment, and admission, and qualification of trainers and availability of training facilities

Training Needs Assessment is being conducted at Institutional Level.

The data was collected from students of TVET institutions, recent graduates, teachers and Administrators. Questionnaires ranging from “Highly satisfied to Unsatisfied”; open-ended questionnaires; interview schedules as well as documents check list were used to collect data.

**Table 4.2: Students and recent graduates’ perception for joining/attending TVET**

	Frequency	Percentage	W. A	s-value	remark
<b>Unsatisfied (1)</b>	14	<b>10.70%</b>	<b>2.38</b>	<b>0.000</b>	
<b>Satisfied (2)</b>	53	<b>40.46%</b>			
<b>highly satisfied (3)</b>	64	<b>48.85%</b>			
<b>Total</b>	131	100%			



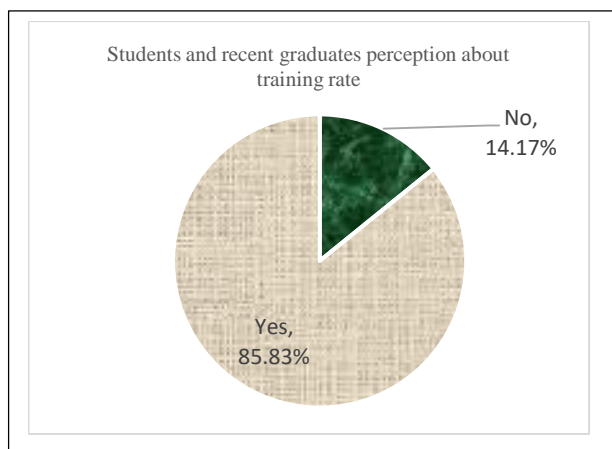
As we may see from the table 4.2 and pie chart above, 48.85% of participants were highly satisfied to join (for having attended) TVET institutions, 40.46% of them were satisfied and only 10.17% of participants were unsatisfied to join (for having attended) TVET institutions. The weighted average is 2.38 ( $2.50 > 2.38 > 1.50$ ) which means that participants were satisfied to having joined TVET institutions.

The chi-square test significance value is 0.00 level which is less than alpha of 0.05 ( $p > 0.05$ ) level of significance, which indicate that the response on this statement is not statistically significant,

thereby, signifying that the null hypothesis is rejected. And the opinions of the respondents on this statement were accepted which is statistically significant to say that the majority of participants are satisfied for joining or attending TVET program.

**Table 4.3: Students and recent graduates’ perception on practical activities**

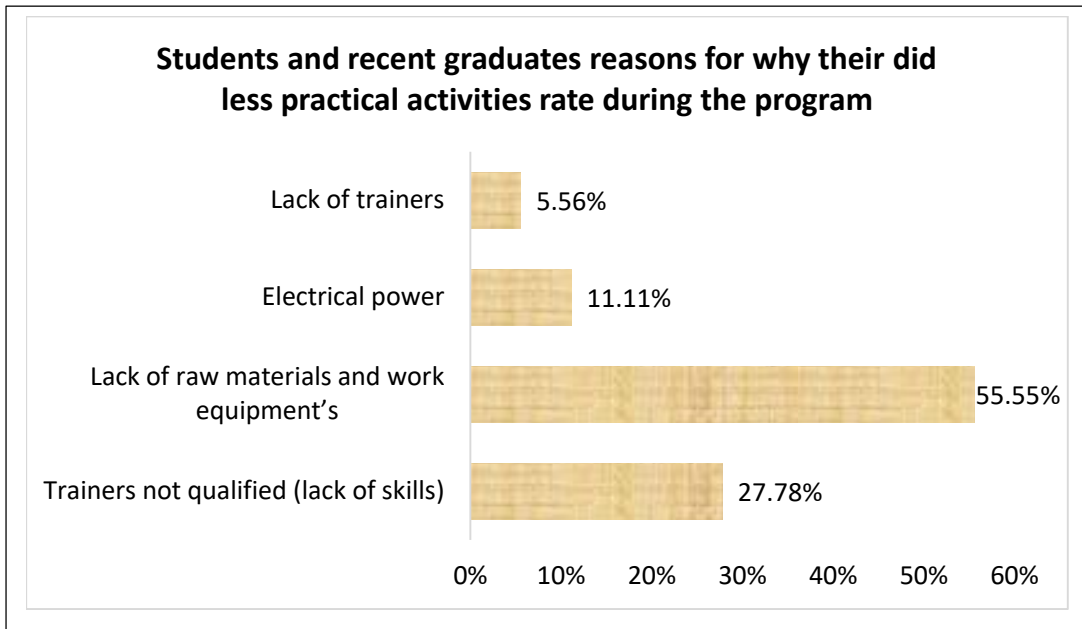
	No	Yes	S-v
<b>Have you got enough practical training during your training?</b>	18 (14.17%)	109 (85.83%)	0.000



As we may see from the table 3.3 and pie chart above, majority, 85.83% of participants said “Yes” (agreed) on this item, only 14.17% of them were satisfied and only 10.17% of participants answered “No (disagreed) “regarding the statement.

The chi-square test significance value is 0.00 level which is less than alpha of 0.05 ( $p > 0.05$ ) level of significance, which indicates that the response on this statement is not statistically significant, thereby, signifying that the null hypothesis is rejected. And the opinions of the respondents on this statement were accepted which is statistically significant to say that the majority of participants have got enough practical training during their program.

**Figure 4.1: Factors for why current trainees and graduates did fewer practical activities in their TVET institution.**



According to the graph of table 4 above, among the 10.17% recent graduates who did not get enough training during their program, 55.55% of them accused the lack of raw materials and work equipment, 27.78% revealed that the trainers were not qualified (lack of skills), 11.11% cited Electrical power as a problem and 5.56% said it was due to the lack of trainers.

**Is the training program offered in your institution identified through needs assessment at institutional level?**

This question was asked to the trainers. All the trainers had responded “yes”. So, in all the institutions of our study, the training programs offered were based on needs assessment. And all had listed the documents and equipment provided by the government.

**How training needs is assessed and relevance of training to local need assured?**

This question was asked to TVET administrators (principals). They said that, training is provided based on the official program or training standards and documents proposed by the ministry of employment and vocational training (MINFOPRA) and the ministry of secondary education (MINESEC).

The TVET regional inspector said that “training demands are evaluated based on programs proposed by the MINESEC and MINFOPRA. The programs have been raised to meet the demands of the local levels with some addition of innovative courses.

#### 4.4 Current practices (admission, qualification of trainers and availability of training facilities)

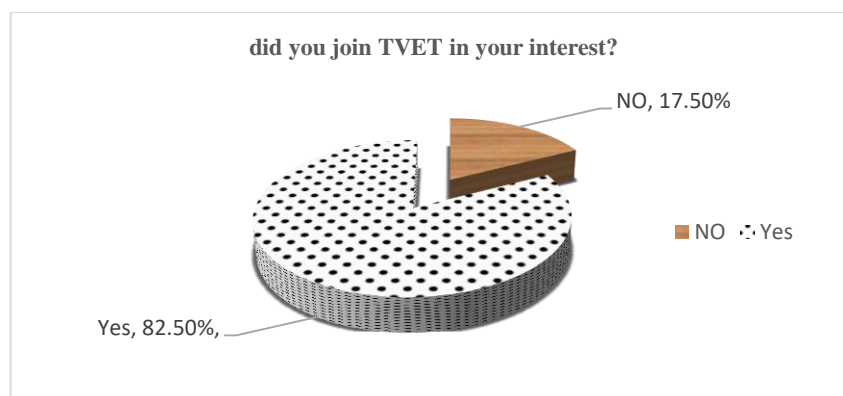
##### Approach of Trainees Admission

For this sub-objective, the data was collected from students and Administrators of TVET institutions. The researcher used “Yes-No” questionnaire; open-ended questionnaire; interview schedule as well as documents observation or checklist to collect data.

**Table4.4: Approach of trainees’ admission**

	No	Yes	s-value
<b>Did you join TVET education in your interest</b>	21 (17.5%)	99 (82.5%)	0.000
<b>Are you assigned to your field of study according to your choice</b>	18 (15%)	102 (85%)	0.000
<b>Did you have any prior information about the training program you have joined</b>	52 (43%)	69 (57%)	0.122

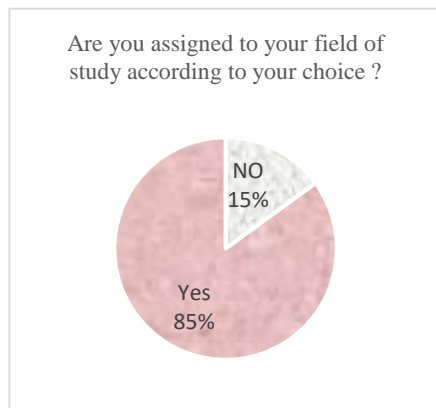
#### **Did you join TVET education in your interest?**



According to the table 5above, 82.5% of students said they joined TVET according to their wish and justified their choices by saying they wanted to become future engineers, or to become

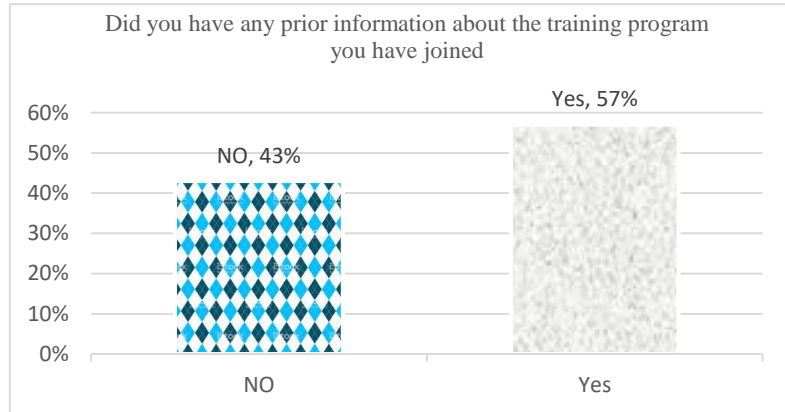
technicians or professionals qualified in their respective fields. Some are looking for technical skills they consider as very important for self-employment, for development of the country and few others expected to get a good job as chief executives of company or becoming TVET teachers. However, 17.5% of the respondents who are students have joined technical education without their interest. They gave many reasons behind their enrollment for instance, family pressures (parents have forced them) has been the main factor as about 90% of them said. And others gave others reasons such as (age issue, lost the entry to first year general college...). The chi-square test significance value is 0.00 level which is less than alpha of 0.05 ( $p > 0.05$ ) level of significance, which indicate that the response on this statement is not statistically significant, thereby, signifying that the null hypothesis is rejected. And the opinions of the respondents on this statement were accepted which is statistically significant.

#### **Are you assigned to your field of study according to your choice?**



The pie chart indicates that, 85% of the students agreed to be assigned to the specialty, which they were interested. Nevertheless, 15% of them did not agree. And for most of them, it was their principal/chief of establishment who chose for them, for some, it was one of their family members (mother, brother...) or friends. In addition, some said because they did not find their area of interest (specialty) in the institution, they did not have any choice to pick up another field. The chi-square test significance value is 0.00 level which is less than alpha of 0.05 ( $p > 0.05$ ) level of significance, which indicates that the response on this statement is not statistically significant. Therefore, the null hypothesis is rejected. And the opinions of the respondents are accepted.

### Did you have any prior information about the training program you have joined?



According to the graph above, 57% of respondents agreed and 43% said, they did not have any prior information before joining the TVET institution. Most of the respondents agreed they got the information from their family members (father, mother, senior brother, sister, etc.). Some of them said they got information from their friends, neighbors, administration, institute's catalog, through internet or radio press. The chi-square test significance value is 0.122 level which is higher than alpha of 0.05 ( $p > 0.05$ ) level of significance, indicating that the response on this statement is statistically significant, thereby, signifying that the null hypothesis is accepted. And the opinions of the respondents on this statement were rejected which is statistically significant.

All the administrators (Principals/Heads of TVET institutions) said the 'awareness is done during trainees' admission' through radio communication and under a competitive entrance examination for both first year and second cycle. Announcements are launched in order to attract the awareness of everyone about the entrance examination into the TVET institution. Regarding how the trainees are assigned to their fields of study (specialty), most of them affirmed that, it is according to the trainee choice (interest) but this is also relative to the availability of places (seats) in the selected field of study.

In the same line, the TVET Regional coordinating inspector, responded that "The admission of trainees is done either by a competitive examination or by case-study of the files of candidates (documents such as transcript, Cumulative Grade Point Average (CGPA), background...etc.). It should be worth noted that, it is the trainee who chooses his field of study by himself and he is offered the corresponding training.

### Trainers' Qualification

Responses to the five-point-scale questionnaire related to trainers' competence were analyzed by running frequency distributions, percentages, and chi-square or t-test (case of small size sample) to show students' perception of their trainers.

These responses ranged from strongly agree to disagree on the five-point-scale. The researcher identified five necessary item statements in examination of trainer's competence. The following tables (2 show answers of students, about items related to trainers' competence in the provision of training. Where, strongly agree (SA) = 1; Agree (A) = 2; Undecided (U) 3; Disagree (D) = 4; Strongly Disagree (DS) = 5. Weighted average (WA) and S-value that represent the significant value got from chi square test or t-test (case of small size sample).

**Table 4.5 : responses of students to items related to their provision of training.**

S/No	ITEMS	5(SA)	4(A)	3(U)	2(D)	1(SD)	W.	S-v	remark
	<b>RELATED TO TRAINERS' COMPETENCE</b>						<b>A</b>		
1	the trainers provide in-depth training by contextualizing with local reality (knowledgeable)	41 (33.6%)	61 (50%)	8 (6.6%)	9 (7.4%)	3 (2.5%)	4.05	0.000	
2	trainers are capable enough in providing skillful practical training	48 (39.3%)	39 (32%)	19 (15.6%)	14 (11.5%)	2 (1.6%)	3.96	0.000	
3	trainers are enthusiastic for the training they provide (have positive attitude)	44 (36.4%)	56 (46.3%)	7 (5.8%)	9 (7.4%)	5 (4.1%)	4.03	0.000	

4	the trainer is resourceful in preparing teaching-learning resources	51 (41.8%)	47 (38.5%)	13 (10.7%)	9 (7.4%)	2 (1.6%)	4.12	0.000	
5	the trainers have high expectations for their trainee's achievement	75 (61.5%)	37 (30.3%)	6 (4.9%)	4 (3.3%)	0 (0%)	4.50	0.000	

**Statement 1:** it can be seen from table (6), that, 33.6% of students strongly agreed, 50% agreed that their teachers had given them deeper training and contextualized with their local realities.6.6% of them were undecided, 7.4% disagreed and 2.5% strongly disagreed that the trainers provided them in-depth training by contextualizing these training with the local reality (knowledgeable). The weighted average is 4.05 ( $4.50 > 4.05 > 3.50$ ) which agreed that trainers provide the training in depth by contextualizing with local reality (knowledgeable).

The chi-square test was performed with significance value of 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, that indicate that the response on this statement is not statistically significant, thereby, signifying that the null hypothesis is rejected. And the opinions of the respondents on this statement were accepted which is statistically significant to agree that trainers provide the training in depth by contextualizing with local reality (knowledgeable).

**Statement 2;** table (6) depicts that trainers are capable enough in providing practical training (skillful), 39.30% of responded strongly agreed with the statement, 32% of them agreed that the trainers are capable enough in providing practical training (skillful), 15.6% of them were undecided, 11.5% disagreed and 1.6% strongly disagreed with the statement. The weighted average is 3.96 ( $4.50 > 3.96 > 3.50$ ) which agree that the trainers are capable enough in providing practical training (skillful).

The significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were



accepted which is statistically significant to agree that trainers are capable enough in providing practical training (skillful).

**Statement 3:** as we may see from table (6), 36.6% of the respondents strongly agreed, 46.30% of them agreed that trainers are enthusiastic with the training they provide (they have positive attitude towards training). 5.80% of them were undecided, 7.40% disagreed and 4.10% of them strongly disagreed to the statement. The weighted average was 4.03 ( $4.50 > 4.03 > 3.50$ ) which is in line with the statement that trainers are enthusiastic with the training they provide (they have positive attitude towards training).

The significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, meaning that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted. And is statistically significant to agree that trainers are enthusiastic for the training they provide (have positive attitude).

**Statement 4:** It may see from table (6) that 41.8% of the respondents strongly agreed and 38.50% of them agreed that the trainer is resourceful in preparing teaching-learning resources, 10.70% of them were undecided, 7.40% disagreed and 1.60% strongly disagreed to the statement. The weighted average was 4.12 ( $4.50 > 4.12 > 3.50$ ) which agreed that the trainer is resourceful in preparing teaching-learning resources.

The chi-square significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, meaning the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to agree that the trainer is resourceful in preparing teaching-learning resources.

**Statement 5:** as we may see from table (6), majority of the respondents, 61.50% of them strongly agreed and 30.30% of them agreed that the trainers have high expectations for their trainee's achievement, 4.90% of them were undecided, 3.30% of them disagreed and 0% strongly disagreed with the statement. The weighted average was 4.50 ( $4.50 \geq 4.50$ ) which strongly agrees that the trainers have high expectations for their trainee's achievement.

The chi-square significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, meaning that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this

statement were accepted which is statistically significant. And strongly agrees that the trainers have high expectations for their trainee's achievement.

**Table 4.6: responses of recent graduates to items related to how they rate the relevance of the training program they attended to their locality.**

S/No	The relevance of the training program	5(VH)	4(H)	3(U)	2(L)	1(VL)	W. A	s-v	remark
1	The responsiveness of training to local need	2 (25%)	6 (75%)	0 (0%)	0 (0%)	0 (0%)	4.25	0.006	
2	The attachment of training to local indigenous technology	0 (0%)	4 (50%)	2 (25%)	0 (0%)	2 (25%)	3	0.024	
3	The sensitivity of training to local productivity (support of productivity)	2 (25%)	0 (0%)	4 (50%)	0 (0%)	2 (25%)	2.375	0.035	
4	The relevance of training to trainees need	0 (0%)	8 (100%)	0 (0%)	0 (0%)	0 (0%)	4	0.000	
5	The practical applicability of training in real life	2 (25%)	6 (75%)	0 (0%)	0 (0%)	0 (0%)	4.25	0.006	
6	The flexibility of training to accommodate need of situation	2 (25%)	2 (25%)	4 (50%)	0 (0%)	0 (0%)	3.75	0.018	

7	The involvement of stakeholder in the provision of training (serving target group)	0 (0%)	4 (50%)	2 (25%)	0 (0%)	2 (25%)	3	0.024
---	--	-----------	------------	------------	-----------	------------	---	-------

**Statement 1:** as we may see from the table 7, 25% of respondents responded very high and 75% of them responded that responsiveness of training to local need is high. The weighted average is 4.25 ( $4.50 > 4.25 > 3.50$ ) which means that the responsiveness of training to local need is high.

The t-test significance value is 0.006 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that responsiveness of training to local need is high.

**Statement 2:** as we may see from the table 7, nobody responded very high and 50% of them responded that the attachment of training to local indigenous technology is high, 25% unknown, 0% low and 25% said the attachment of training to local indigenous technology is very low. The weighted average was 3.0 ( $3.50 > 3.0 > 2.50$ ) which means that the attachment of training to local indigenous technology level is unknown by the respondents.

The t-test significance value is 0.024 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant; consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the attachment of training to local indigenous technology level is unknown.

**Statement 3:** It can be seen from the table 7 that, 25% of them responded that the sensitivity of training to local productivity (support of local productivity) is very high, 50% unknown, 0% low and 25% said the attachment of training to local indigenous technology is very low. The weighted average is 2.375 ( $2.50 > 2.375 > 1.50$ ) which means that the sensitivity of training to local technology productivity (support of local productivity) is low.

The t-test significance value is 0.035 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant;

consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the sensitivity of training to local productivity (support of local productivity) is low.

**Statement 4:** according the table 7, totality of the respondents, 100% responded that the relevance of training to trainees' need is high. The weighted average is 4.0 ( $4.50 > 4.0 > 3.50$ ) which means that the relevance of training to trainees' need is high.

The t-test significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the relevance of training to trainees' need is high.

**Statement 5:** table 7 shows that, 25% of respondents responded very high and 75% of them responded that responsiveness of training to local need is high. The weighted average is 4.25 ( $4.50 > 4.25 > 3.50$ ) which means that the practical applicability of training in real life is high.

The t-test significance value is 0.006 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the practical applicability of training in real life is high.

**Statement 6:** as we may see from the table 7, 25% of respondents responded very high and 25% of them responded that the flexibility of training to accommodate need of situation is high, 50% unknown, 0% low and 0% said the attachment of training to local indigenous technology is very low. The weighted average is 3.75 ( $4.5 > 3.75 > 3.5$ ) which means that the flexibility of training to accommodate need of situation is high.

The t-test significance value is 0.018 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the flexibility of training to accommodate need of situation is high.

**Statement 7:** as we may see from the table 7, none of the respondents responded very high and 50% of them responded that the involvement of stakeholders in the provision of training (serving

target group) is high, 25% unknown, 0% low and 25% said that the involvement of stakeholders in the provision of training (serving target group) is very low. The weighted average is 3.0 (3.50 >3.0>2.50) which means that the involvement of stakeholder in the provision of training (serving target group) is unknown by the respondents.

The t-test significance value is 0.024 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the involvement of stakeholder in the provision of training (serving target group) is unknown.

**Table 4.7 : Responses of Trainers to Items Related to Their Provision of Training.**

S/No	Items Related to Trainers	5(SA)	4(A)	3(U)	2(D)	1(SD)	W. A	s-v	Remark
1	It is difficult to me to contextualize the provision of training to local reality	3 (25%)	9 (75%)	0 (0%)	0 (0%)	0 (0%)	4.25	0.000	
2	It is interesting for me to provide practical training	6 (50%)	6 (50%)	0 (0%)	0 (0%)	0 (0%)	4.50	0.000	
3	It is difficult for me to prepare decentralized competence-based module	3 (25%)	0 (0%)	3 (25%)	0 (0%)	6 (50%)	2.50	0.339	
4	It is enthusiastic for me to be trainer in TVET	3 (25%)	9 (75%)	0 (0%)	0 (0%)	0 (0%)	4.25	0.000	

**Statement 1:** it can be seen from table 8, that, 25% of the respondents strongly agreed, 75% of them agreed that it is difficult for them to contextualize the provision of training to local reality. The weighted average is 4.25 (4.50 >4.25 > 3.50) which agreed that it is difficult for them to contextualize the provision of training to local reality.

The t-test was performed with significance value of 0.000 level less than alpha of 0.05 ( $p < 0.05$ ) level of significance, indicating that the response on this statement is not statistically significant, thereby, signifying that the null hypothesis is rejected. And the opinions of the respondents on this statement were accepted which is statistically significant to agree that it is difficult to them to contextualize the provision of training to local reality.

**Statement 2:** as we may see from the table 8, majority of the respondents, 50% of them strongly agreed and 50% of them agreed that it is interesting for them to provide practical training. The weighted average is 4.50 ( $4.50 \geq 4.50$ ) which strongly agrees that it is interesting for them to provide practical training.

The t-test significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, meaning that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to strongly agree that it is interesting for them to provide practical training.

**Statement 3:** it can be seen from table 8, that, 25% of the respondents strongly agreed that it is difficult for them to prepare decentralized competence-based modules, 25% of them were undecided, 0% disagreed and 50% of them, strongly disagreed with the statement. The weighted average is 2.50 ( $2.50 \geq 2.50$ ) which means the respondents were undecided on the point that it was difficult for them to prepare decentralized competence-based modules.

The t-test was performed with significance value of 0.339 level which is higher than alpha of 0.05 ( $p > 0.05$ ) level of significance, meaning that the response on this statement is statistically significant, thereby, signifying that the null hypothesis is accepted. And the opinions of the respondents on this statement were rejected which is statistically insignificant.

**Statement 4:** It may be seen from table 8 that, 25% of the respondents strongly agreed and 75% of them agreed with the item. The weighted average is 4.25 ( $4.50 > 4.25 > 3.50$ ) which agrees that the teachers were enthusiastic to be trainers of TVET.

The t-test significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, meaning the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were

accepted which is statistically significant to agree that teachers were enthusiastic to be trainers of TVET.

Regarding the teacher’s competence, all the principals/heads of TVET institutions, had affirmed that the trainers are qualified, very professional and very competent in their respective fields. This is because the teachers had received adequate trainings.

On the same vein, the TVET regional coordinating inspector in the Garoua city, said that “the competence of the trainers is adapted for this type of training by some adjustments have been made in order to permit the different trainers to upgrade their levels through different internships aimed at perfecting them on the different domains of competences”.

### *Training Facilities*

To find out about training facilities, the researcher had laid down six different items as shown in table 9. The same techniques as above were used in analyzing the quantitative data collected from students as well as teachers, but with three-point-scale questionnaires labelled from sufficient enough to not sufficient. In addition, qualitative data from administrators was used to verify the statistical results.

**Table 4.8 : Teachers and students’ responses regarding training facilities**

S/No	Items related to institute’s facilities	Sufficient enough (3)	Moderate (2)	Not Sufficient (1)	W. A	S-v	Remark
1	The sufficiency (access) of workshop room	43 (32.82%)	26 (19.85%)	62 (47.33%)	1.85	0.252	
2	The availability of relevant training tools, equipment and machine for your program	31 (23.66%)	29 (22.14%)	71 (54.20%)	1.69	0.002	
3	The sufficiency of raw materials for practical exercise	44 (32.83%)	33 (24.63%)	57 (42.54%)	1.90	0.006	

<b>4</b>	The availability of training guides/trainees text book	28 (21.05%)	18 (13.54%)	87 (65.41%)	1.56	0.000	
<b>5</b>	The existence of electric power for practical exercise	37 (30.30%)	48 (39.34%)	37 (30.30%)	2.00	0.000	
<b>6</b>	The availability of financial support	0 (0%)	3 (25%)	6 (75%)	1.33	0.000	

**Statement 1**, regarding workshops room availability, table 9 reveals that 32, 82% of respondents responded the workshop rooms were “sufficient enough”, and 19.85% said moderate and the majority of them, 47.33% responded that workshops rooms were not sufficient. The weighted average is 1.85 ( $2.50 > 1.85 > 1.50$ ) which means that workshops room availability was moderate. The significance value is 0.252 level which is higher than alpha of 0.05 ( $p > 0.05$ ) level of significance, meaning the response on this statement is statistically significant, consequently the null hypothesis is not rejected. Therefore, the opinions of the respondents on this statement were rejected which is statistically insignificant to say that the availability of workshop rooms was moderate.

**Statement 2:** about the availability of training tools, equipment and machine for the program, 23.66% of the respondents said there were sufficient enough, and 22.14 of them said there were moderate, whereas, 54.20% revealed, there were not sufficient training tools, equipment and machine. The weighted average is 1.69 ( $2.50 > 1.69 > 1.50$ ) which means that the availability of relevant training tools, equipment and machine for the program was moderate.

The significance value is 0.002 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, meaning the response on this statement is not statistically significant; consequently, the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the availability of relevant training tools, equipment and machine was moderate.



**Statement 3:** From table 9, it is seen that, 32, 83% of respondents mentioned that, there were sufficient enough raw materials for practical exercise, 24. 63% of them said moderate and majority, 42.54% of them found that there were not enough raw materials for practical exercise. The weighted average is 1.90 ( $2.50 > 1.90 > 1.50$ ) which means that the availability of raw materials for practical exercise was just moderate.

The significance value is 0.006 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response to this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the availability of raw materials for practical exercise was just moderate.

**Statement 4:** According to table 9, only 21.05% of the respondents' found that there was sufficient enough training guides/text books, 13.54% of them said moderate and the majority, 65.41% of them revealed that the training guides and textbooks were not sufficient enough. The weighted average is 1.56 ( $2.50 > 1.56 > 1.50$ ) which means that the availability of training guides/text books were just moderate.

The significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the availability of training guides/text books were just moderate.

**Statement 5:** According to the responses to this statement, 30.3% of respondents said there was sufficient enough electric power for practical exercise. 39.4% of them responded moderate and 30.3% of them said not sufficient. The weighted average is 2.0 ( $2.50 > 2.0 > 1.50$ ) which means that the existence of electric power for practical exercise was just moderate.

The significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant, consequently the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that the existence of electric power for practical exercise was just moderate.

This situation reflects the fact that some of our respondents are from TVET institutions located at the center of the city, so they cannot face the same problem of electrical power instability as others

from TVET institutions at the surrounding (outskirt) of the city. Thus, definitely, TVET institutions surrounding Garoua city have a lack of constant electrical power.

Statement 6: According to table 9, nobody (0%) of the respondents said sufficient enough, 25% responded moderate and majority, 75% of them exactly said that there was not sufficient financial support. The weighted average is 1.33 ( $1.33 < 1.50$ ) which means that financial support was not quite sufficient.

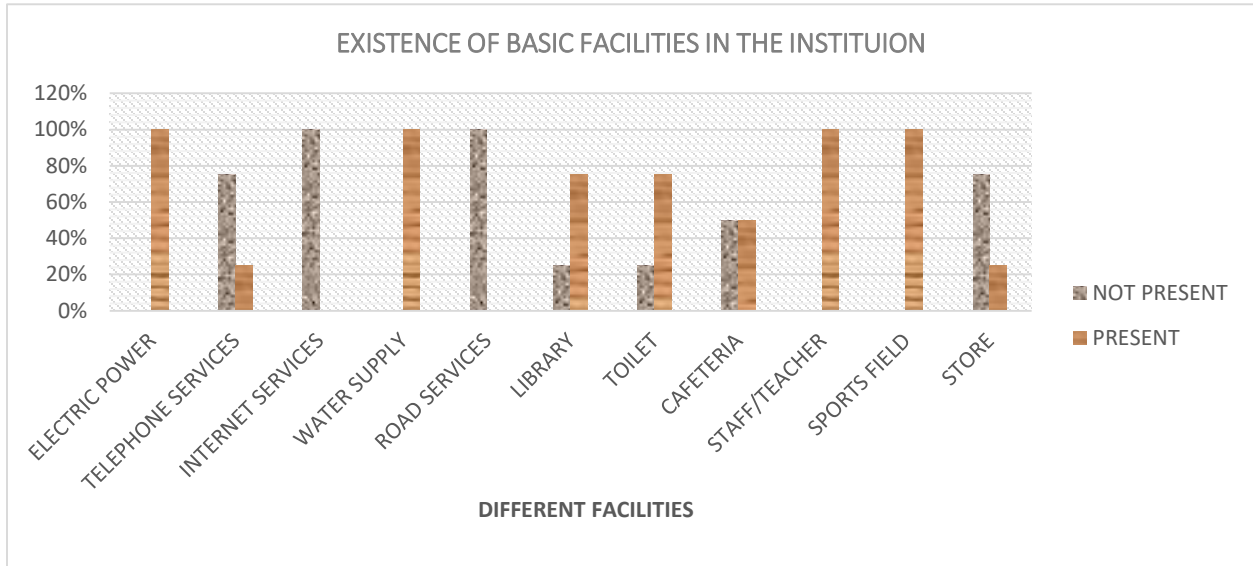
The significance value is 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, which means that the response on this statement is not statistically significant; consequently, the null hypothesis is rejected. Therefore, the opinions of the respondents on this statement were accepted which is statistically significant to say that financial support was not quite sufficient.

Now let us have a look to what our Administrators have verbally responded and what we can pick up from the checklist about the training facilities, so that we can make conclusion. Consequently, the students from these TVET institutions graduate without practical skills. This is one of the causes of unemployment of graduates from certain TVET institutions.

### **Administrators' responses concerning the training facilities**

Most of the administrators (principals), said that “we have workshops available in all the sectors and some are better equipped than the others “and another principal added that “...but we still have some work to be done because we are still to acquire some latest equipment for the workshops”. The graph below shows the observation of institutional facilities provided by the principals of TVET institutions:

**Figure 4.2 :Existence of Basic Facilities in the Institutions**



From the bar chart above, it can be seen that, electric power; sports field; Staff/teacher; water supply are only the facilities available in all the institutions of the study. Internet services and road services are totally absent in all the institutions. Telephone service and store are present in only 25% of institutes and 75% of the institutions does not have these two facilities. 50% of the institutions have Cafeteria and others haven't, whereas only 75% of institutions have a library and toilet.

TVET inspectors said that “most of the training centers and institutions are well equipped in the city. Nevertheless, some of them have courses that suffer from the lack of appropriate workshops and laboratories contrary to some that are well equipped for some courses. This means that out of city, institutions workshops are not well equipped.

**4.5 The extent of training offerings and assessment (extent of linkages between TVET institutions & enterprises, achievement in competence and graduate employability).**

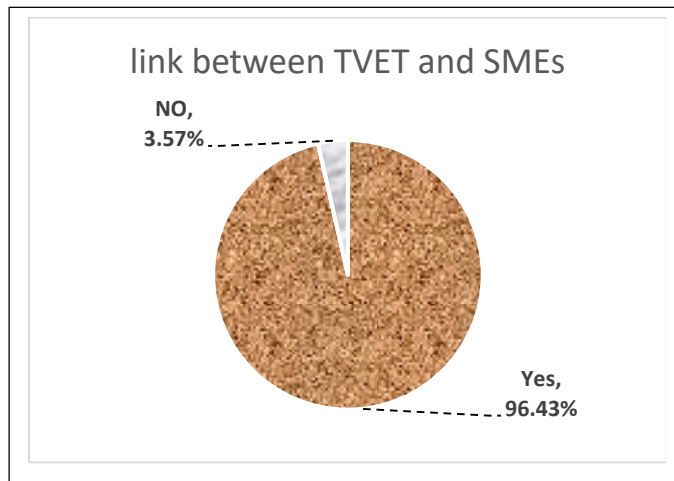
Linkage between TVET, Micro, and Small Enterprises

For this sub-objective, the data have been collected from students, recent graduates, teachers and Administrators. The researcher used “yes-no” questionnaire; open-ended questionnaire; interview as well as observed documents or checklist to collect data. (See table 10).

**Table 4. 9 : Relationship between TVET institution and SMEs**

	No	Yes	s-v
<b>Is (WAS) there any sensible relationship between your training institution and local enterprises (SMEs) while you attend your training?</b>	4 (3.57%)	108 (96.43%)	0.000
<b>Is there any follow-up and support from your institution and local enterprises after your graduation?</b>	6 (30%)	14 (70%)	0.090

**Is (Was) there any sensible relationship between your training institution and local enterprises (SMEs) while you attend (attended) your training?**



According to table 10 and the pie chart above, 96.43% of the respondents said “yes” (agreed) that their institution has relationship with the local SMEs. Only 3.47% of the respondents responded “No” meaning their institution does not have any link with the local enterprises. The chi-square test was performed with significance value of 0.000 level which is less than alpha of 0.05 ( $p < 0.05$ ) level of significance, that indicate that the response on this statement is not statistically significant, thereby, signifying that the null hypothesis is rejected. And the opinions of the respondents on this statement were accepted which is statistically significant to say that, majority of institutions have a relationship with local SMEs.

**Is there any follow-up and support from your institution and local enterprises after your graduation?**

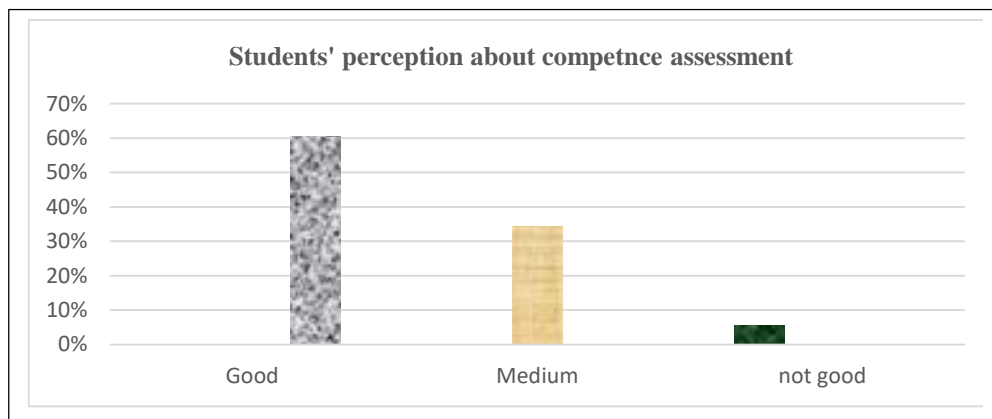
Majority, 70% of the respondents responded “yes” and minority of them, 30% responded “NO” about the statement. The chi-square test significance value is 0.090 level which is higher than alpha of 0.05 ( $p > 0.05$ ) level of significance, that indicate that the response on this statement is statistically significant, thereby, signifying that the null hypothesis is not rejected. And the opinions of the respondents on this statement were rejected which is statistically insignificant to say that, there is almost a follow-up and support from the institution and local enterprises for graduates.

On the other hand, TVET principals said their main relationship with SMEs is based on service offerings, SMES offer internship to their learners and guided visit to the company. However, one of them affirmed that the relationship it not legal (informal). These talks, have clarify by two chiefs of SMEs, both said, their enterprises have a work relation with TVET institutions, which is to grant traineeship to the TVET learners. And they reveal there is no official link yet, but they believed it is quite necessary for better management of the trainees. Additional, to answer the question “what is the main concern of the relation?” the two chiefs, confirmed that the relationship focuses only on the internship offer to the learners.

TVET inspector affirmed that, nowadays, this relation between TVET institutions and SMEs, exist but it is not yet regulated by any legal framework, but it is ..... competence.

Achievement in Competence Certification Assessment

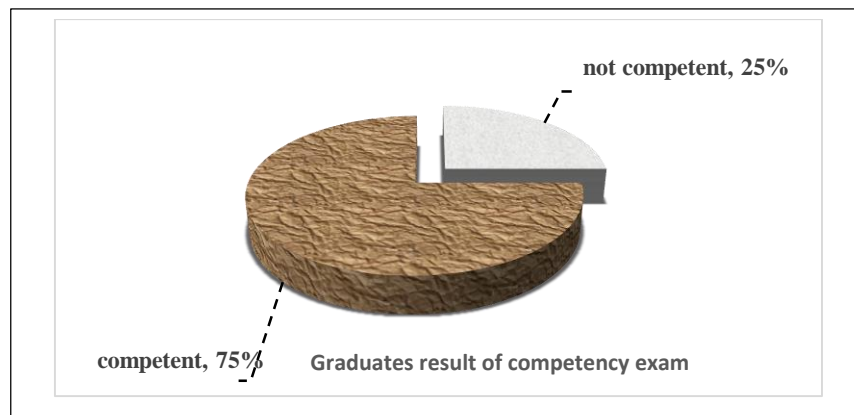
The researcher had used open-ended questionnaires, YES-NO questionnaires and interview to carry out the information related to this statement.



About the statement relative to the feelings of current students regarding their competence assessment in their respective institutions. According to the above graph, about 60% of students find the evaluation process and strategies are good. Good, means evaluation is relative to contain the have learned or received from their teachers, the questions (Papers, instructions of evaluations) both practice and theory are in their level, efficient time as well as, the teachers mark the papers well. The second group, which represents 34% of the respondent, said that evaluation system strategy is just medium. Some teachers provide sometime the questions different to the real contain, so that it is difficult for them, others do not provide the necessary time to cover the evaluations, with strong exercises and too long. Finally, 6% said the evaluation system is not good, the teachers mark very bad, the questions papers are totally above their levels, and they are completely different with the way they have learned.

### **Did you take competency exam?**

All the recent graduates from TVET institutions said they have taken a competency exam before their graduation. And 75% of them got “competent “as a result and 25% of them were “not competent” as showing below in the figure below.



This 25% of recent graduate not competence said that they are not competent well in both theory and practice. They justify that there are many subjects, and most of them are not matching with our field, or needs. That caused us waiting a time to read them also if you need to pass the exam so this reveals the efficiency of curriculum development, design and assessment. Brief curriculum contains, which was revealed by several authors in literature review.

For the teachers, they believed that the level of competence of their learners is good and acceptable; the learners are qualified for the job market at the end of the program. But one of them said, it is tough, but every learner can find his place.

According to the inspector, he strongly believes that, with the introduction of the training internship at the end of the program, the competence level will be improved and mostly compensated biased on the demands and needs of the structures receiving the trainees.

Employability of TVET Graduate Trainees

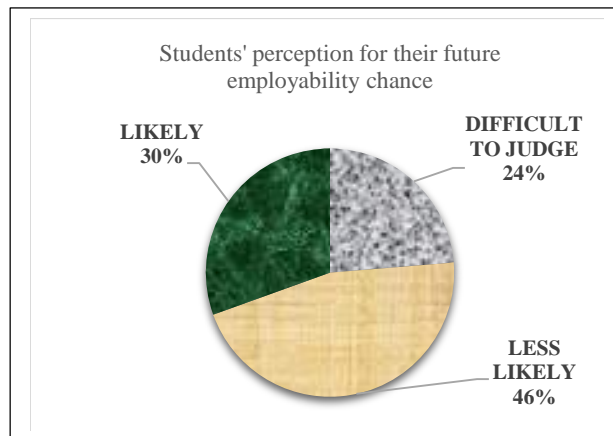
As above, both quantitative and qualitative data have been collected through, multiple-choice questionnaires, open-ended questionnaires and as well, as interviews. The data have analyzed by using descriptive statistics, frequency and chi-square.

**How do you judge your employability upon completion of your training?**

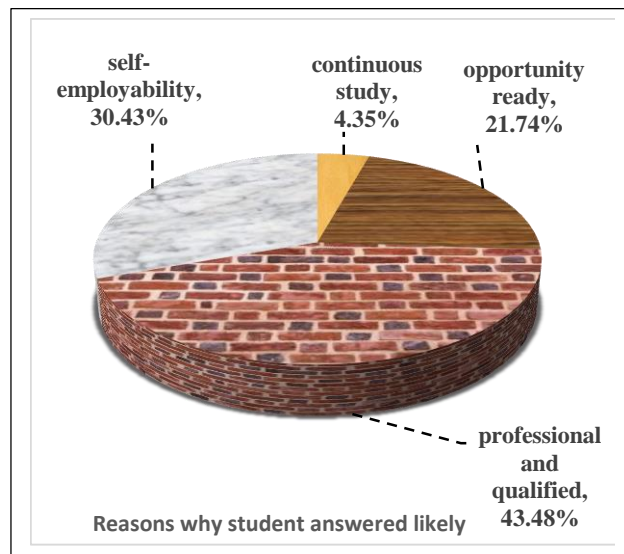
The **table 4.10** below shows the responds of current students to the question related to their employability upon completion of the program.

**Table 4.10 : Current trainees’ perception to the possibility of their future employability.**

How do you judge your employability upon completion of your training?	Frequency	Percentage	S-value
<b>DIFFICULT TO JUDGE</b>	28	23.7%	0.011
<b>LESS LIKELY</b>	54	45.8%	
<b>LIKELY</b>	36	30.5%	
Total	118	100%	

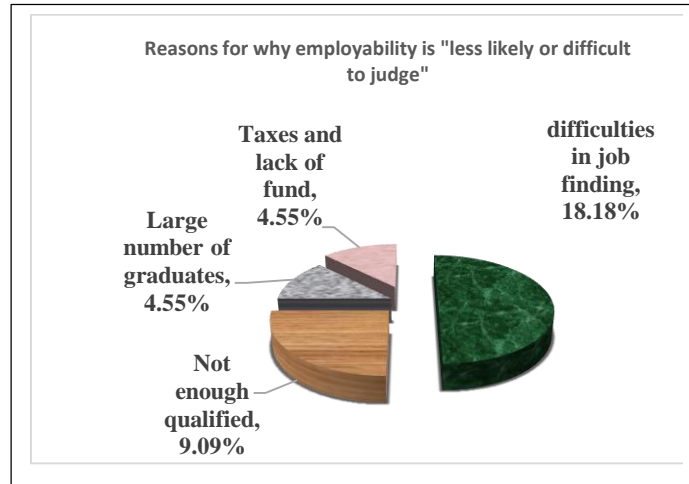


According to table 4.10 and graph above, 45.8% of students said that their employability after completing the program is “less likely” whereas, 23.7% of them said that their chance of employability is quite “difficult to judge” now. Only 30.50% of students were looking for their employability “Likely”, they are confident to get a job after completing the program. The chi-square test significance value is 0.011 level which is less than alpha of 0.05 ( $p > 0.05$ ) level of significance, that indicates that the response on this statement is not statistically significant, thereby, signifying that the null hypothesis is rejected. And the opinions of the respondents on this statement were accepted which is statistically significant.

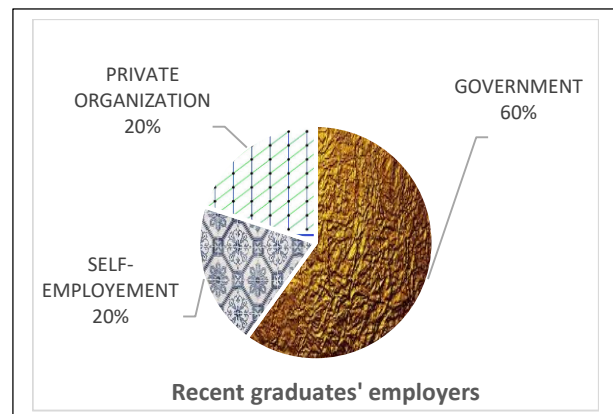
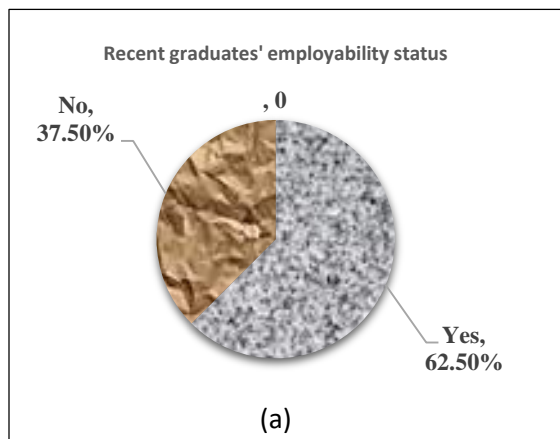


The pie chart or table above represents the different reasons given by the students who are more confident to be recruited somewhere after graduation. 43.48% of this category, justified by the fact that they are professional and qualified and they have received efficient and reliable training both in the school and during the internship so they have enough sufficient technical skills to challenge the job market. 30.43% are looking for self-employment, they said that right after graduation they are going to start their own small business, like opening a restaurant, a workshop or a SMEs in electrical and so on. Whereas, 21.74% of them, their employability is already confirmed. Certain are going to be recruited by the company where they have performed the internship, and said they have a family member or friend working for a company or who is good situated in government so they need the certificate to work. Another argument given by some also, is that, they are going to work for a family SMEs, so their place is ready.





Both the students who said that their chance of employability after the training is “less likely or difficult to judge”, have justify their opinion by similar several points represent in the table or pie chart above.63.64% of them said Corruption issue in the Cameroon is the factor against their employability. They explained that, it is not possible to get easily a job in Cameroun unless you have someone in good position both in the government or private; otherwise, you have to give some money.9. 09% said they are not enough qualified to challenge the socio-professional area. This can see as a drawback of the achievement in competence. 4.55% of future graduate worried about high taxes and fund or budget. They said these two elements do not motivate for self-employability, even if you have a fund to start, taxes will pull you down. Another group represented also 4.55%, are afraid to get job because of the large number of graduates from several institutions over the country, plus, some coming from abroad, which increase every year. And finally, 18.18% of students, complained about the difficulties in the process, they said, you have spent some money to legalize some documents, pay some fee for to participate to the recruitment competition and so on.



For the recent graduates (2014-2017), according to the pie chart (a), 62.50% got a job and 37.50% still unemployed. In the pie chart (b), 60% of the recent graduates who are employed are working for the government, 20% are self-employed by creating their own business (SMEs) and 20% others working for private organization (companies). The graduates working for the government, their employability have conformed right after graduation, whereas for self-employment, they took more than one year to get a fund and then start their business. The last group who are working for private sector, most of them said they got a job less than one year, others before graduation and some took more than one year to find a job.

For the same question regarding graduates' employability "how do you express about the employability of your graduates' trainees?" The administrators of TVET institutions (principals), said that, all the graduate have a chance to be recruited somewhere, since they are professional and qualified to adapt themselves to the need of their recruiters. Some of them are employed directly into companies while others create their own micro-enterprises. However, they recognized that nowadays, socio-professional insertion is difficult due to the number constantly increasing of graduate each year despite the fact that they have the required qualification to be employed.

### **Is there any mutual effort to effort to support the trainee's employability?**

The chief of CRTV station of Garoua city said that they often recruit competent trainees, mostly those who are coming to perform their internship. But he said that, recruitment is a long process and requires a lot of patience. He added that an effort is still made on this point. For the chief of PROTON TECH enterprise (electrical SMEs), he said that, his company is a newest one, so for now they are not able to support any new employability.

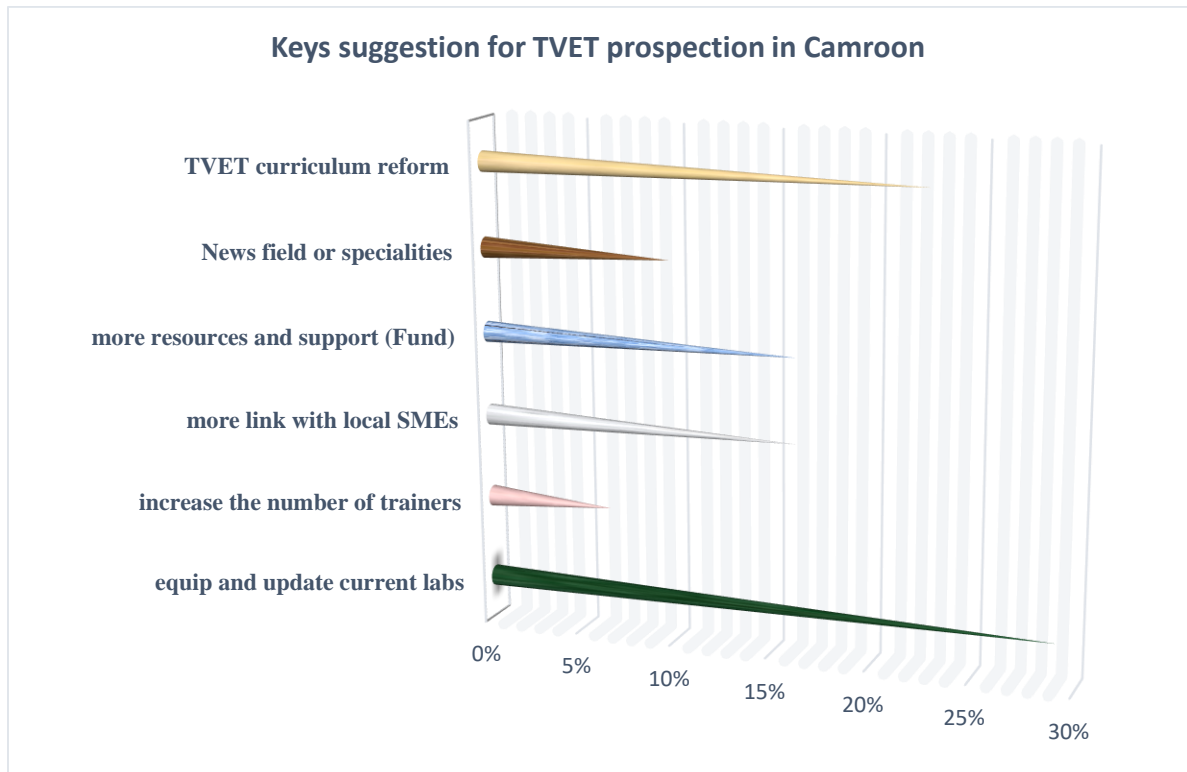
### **How do you express employability of graduate trainees?**

TVET regional coordinating inspector of TVET, said that, the employment area is very vast and complex, but most of the times, young graduates find jobs either through pre-employment methods, so as to just judge their competence or by simply direct employment as permanent employee in some rare cases.

#### 4.6 Assessment the Prospects of TVET from Different Perspectives.

This objective has done by the researcher by getting information from the respondents through open-ended questionnaires and interviews. These qualitative have been summarize, categorize, and then analyses in Excel. Graph below summarizes the keys elements or aspect suggested by different respondents relative to the prospects of TVET.

*Figure 4.3 : Keys suggestion for TVET prospection in Cameroon*



According to the graph, there are six (6) main policies relative to the TVET prospection in the northern region of Cameroon:

- ✓ TVET curriculum reform: about 22.58% of the respondents said that there is a need for curriculum reform in TVET. TVET should focus more on local needs or on the technical skills required by local SMEs; the practical activities and internship duration should be increase and dropping down of some mismatching subjects with any field. as well as review competency assessment as international standard. The practice should be based on real and concrete topic with local technology

- ✓ News field or specialties: about 9.68% of the respondents said that, news or innovation sector need to be created in all TVET sector, so that more TVET can able to solve more demands in the locality.
- ✓ More resource and financial support or budget: about 16.138% of the respondents required to the stakeholders from both government and NGOs, more effort in providing raw materials, financial support or budget. Mostly in the view of internship. in the same view, one of the SMEs chiefs, said that it is necessary to think about to motivate the enterprises, companies that, help the learners to carry out their internship, as well the number of these trainees should be controlled.
- ✓ Official link with local SMEs: about 16.13% of the respondents said that the authorities should think for making the relations between TVET institutions and local SMEs official, so that that the current gap skills rate between skills provided and skills need by SMEs will be reduced considerably.
- ✓ Increase the number of trainers: about 6.45% of the respondents said that there is a huge need of trainers, especially in some specialties since there is a lack of qualified trainers in many fields. And the number of trainees is growing each year so to guide them well, require enough sufficient teachers.
- ✓ Equip and update Labs: about 29.03% of the respondents said it is important to equip all the lab of different specialties, provide all necessary training kits, and regularly update the equipment quality when they are outdated. So that the trainees will have, better training quality and they will be competitive in the socio-professional area.

## CHAPTER V

### SUMMARY, DISCUSSION ON FINDING, CONCLUSION AND RECOMMENDATION

#### 5.1 Introduction

This study was an attempt to investigate the current practices of TVET and how its prospects would look like in the institutions under the study. Hence, the basic questions we used in addressing the issues related to demand driven training, the status of training delivery, the employment issues, the extent of linkages of training to local SMEs and the fate of the future were the issues raised. As a means to seek answers to these questions and to achieve the objective of the study, descriptive survey method was used. The researcher reviewed relevant literature to the study with intentions to address the research questions and prepared questionnaires and interview guides for the participants of the study. Accordingly, three sets of open and close ended questionnaires were prepared for current trainees/students, recent graduate trainees/students and trainers/teachers.

These questionnaires were commented by the research advisors and colleagues and pilot tested to check validity and reliability. Moreover, for easy understanding, the questionnaires for trainees/students were translated into French. And after the necessary correction and modifications, the questionnaires were duplicated and distributed to current trainees/students, and recent graduate trainees/students and trainers/teachers as per the sample. Besides, to gather more detailed information and to substantiate the information acquired through questionnaire, interview was conducted with four Principals of TVET institutions, two heads of SMEs and the Regional Coordinating Inspector of TVET. Moreover, not only were document analyzed but also observations were made. The data obtained were analyzed with the help of SPSS 20. Such statistical tool as percentage and frequency were used to analyze the quantitative data whereas descriptive analysis was used for the qualitative part.

#### 5.2 Summary

This research titled “The Current State of Practices of Cameroon TVET Institutions: Case of Northern Region of Cameroon”, have been conducted with the aim and purpose to investigate on how well TVET is currently implemented and what its fate will be, in order to reveal a clear picture of its current situation and recommend improvement for the future. The following research questions were answered by the different categories of respondents:

- ✓ To what extent the TVET programs being delivered are relevant and need based and
- ✓ To what extent the training being offered is up to the standard and ensures the competence needed?
- ✓ To what extent the TVET being delivered secure trainee's job?
- ✓ To what extent TVET institutions linked with local Micro and Small Enterprises?
- ✓ What could be the prospect of TVET from different perspectives?

The objectives of this study were to find out:

1. The extent to which training needs assessment is being conducted; examine current practices (admission, qualification of trainers and availability of training facilities).
2. The extent of training offerings and assessment (extent of linkages between TVET institutions & enterprises, achievement in competence and graduate employability) and,
3. To assess the prospects of TVET from different perspectives.

Through these objectives, descriptive survey method was employed in the research study to enable the researcher to describe the prevailing situations both quantitatively as well as qualitatively which eventually helps in drawing valid conclusion. Data was collected from 150 respondents drawn by stratified random sampling and Purposive selection from four (04) Government approved TVET institutions and two SEMs in Garoua North region of Cameroon and its environs. The sampled 123 students/trainees, 12 teachers, 08 recent graduates and 7 administrators were constituted the demographic of the study.

Review literature from different sources revealed that TVET holds the key to training the skilled and entrepreneurial workforce needed for the changing technological workforce (Afeti, 2010). Brief, it was found in several studies that TVET connects education and the world of work. It aims at addressing economic, social and environmental demands by helping youths and adults develop the skills needed for employment, decent work and entrepreneurship. In addition, TVET Cameroon is characterized by the Poor Linkage with the Labor-Market due to the quality of practices, materials and resources according to the Cameroonian author Atayo in 2000.

Questionnaires designed based on five points scale and three points scale were used in collecting quantitative data from current trainees/students, TVET teachers/trainers and recent graduates. By contrast qualitative data have been collected using interview guides and interview schedules and open-ended questionnaire from Heads of departments/principals of TVET institutions, regional

coordinating inspector of TVET, and Heads of SMEs and also document analysis and structured checklist were used, as well as observation of the real training facilities and structured observation checklist were conducted. The questionnaires of the study were validated by two teachers of the department of Technical and Vocational Education (TVE), IUT. Around 85% (150 returned out of 177 Sent) rate were approximately returned. Both quantitative and qualitative data were analyzed with Statistical Package for Social Science (SPSS) and Microsoft EXCEL software using descriptive statistics. The information collected through semi-structured questionnaires and open-ended question items, observation and document analyses were transcribed; categorized and compiled into themes and summary sheets and then were analyzed. Category percentage, weighted average, chi square test and t-test at the level of significance of 0.05, were used in interpreting the opinions of the respondents.

The finding of the study reveals that, students were satisfied to having joined TVET institutions and majority them have got enough practical training during their program. These training programs offered were based on the official program or training standards and documents proposed by the ministry of employment and vocational training (MINFOPRA) and the ministry of secondary education (MINESEC). The programs have been raised to meet the demands of the local levels with some addition of innovative courses. The admission of trainees is done either by a competitive examination or by case study of the files of candidates (documents such as transcript, Cumulative Grade Point Average (CGPA), background...etc.) and it is the trainee who chooses his field of study and get corresponding training. Only, majority of the training centers and institutions in the city are well equipped. Nevertheless, some of them have courses that suffer from the lack of appropriate workshops and laboratories, however out of city; institutions workshops are poor or equipped with inappropriate and oldest work materials. Nowadays, the relation between TVET institutions and SMEs, exist but it is not yet regulated by any legal framework and it is just focusing on service offerings (internship to the learners and guided visit).regarding employability rate, all the graduates have a chance to be recruited somewhere (private companies or organization, NGO, Government or by creating their own micro-enterprises.), since they are professional and qualified to adapt themselves to the need of their recruiters. However, nowadays, socio-professional insertion is quite difficult and complex due to the number constantly increasing of graduate each year, lack of support from government, high taxes and so on. And finally, there are need on TVET curriculum reform, creation of news field or specialties, effort for more resource

and financial support or budget, making official link with local SMEs, increase the number of trainers as well as equip and update Labs regularly, in order to expert a glorious prospect in the future.

### **5.3 Discussion on the Major Findings**

#### *The findings of the study*

5.1.1 Current practices (extent to which training needs assessment, and admission, and qualification of trainers and availability of training facilities)

#### *Training Needs Assessment*

Findings though this objective indicate that, majority of trainees and graduate from TVET institutions are satisfied for joining or attending TVET program and have got enough practical training during their program. Only an insignificant of them were unsatisfied, since they did not get enough training during their program, due to some factors as lack of raw materials and work equipment, trainers were not qualified (lack of skills), Electrical power issue and lack of trainers in their field. So definitely, there is a need of assessment concerning these factors. The another finding here is that, training is provided based on the official program or training standards and documents proposed by the ministry of employment and vocational training (MINFOPRA) and the ministry of secondary education (MINESEC).in others words, training demands are evaluated based on programs proposed by the MINESEC and MINFOPRA.

5.1.2 Findings on current practices related to admission, qualification of trainers and availability of training facilities.

#### **Trainees Admission**

Findings of the study concerning the approach of student's admission revealed that most of them joined TVET according to their wish and they are aware of the future behind TVET, which can enable them to fulfill their dream and build their carrier their favorite field such engineering, Technician, manager, create their own SMEs and so on. However, still that there are some students joined technical education without their interest but they took enrollment due to family pressures (parents have forced them), age issue, felt admission to general college ... The study fund also that, almost students are assigned to the specialty which they were interested but this is also relative to the availability of places (seats) in the selected field of study as well as the availability of the that field in the institution and The awareness is done during trainees' admission through radio communication and under a competitive entrance examination by case-study of the files of



candidates (documents such as transcript, cumulative grade point average (CGPA), background...etc.) and the Announcements are launched in order to attract the awareness of everyone about the entrance examination into the TVET institution.

### **Trainers/Teachers' Qualification**

#### *Students' responses*

The second sub-objective was to examine teacher's competence or qualification. The findings of the study depicted that, trainers provide the training in depth by contextualizing with local reality (knowledgeable), they are skillful in providing practical training, and they are enthusiastic to provide the training or to do their job and they are resourceful in preparing teaching-learning resources. Additionally, trainers have high expectations for their trainee's achievement and employability. This is going to the same vein as found by Rowe et al. (2012) that, having strong subject knowledge and confidence in one's own ability are essential teacher attributes. In addition, adopting innovative approaches to meet the needs of learners can facilitate effective teaching (for example, changing the setting being used to teach learners). Benefits include increased teacher motivation and a more positive perception of the learning experience amongst learners (Rowe, 2012). Also, Placklé et al.'s (2014) study, which sought to identify learner preferences with regard to learning environments in vocational education (referred to as 'powerful learning environments'), highlighted that learners preferred learning tasks that challenged them and were 'authentic' (p. 110), that is, focused on the real world (Placklé et al., 2014).

#### **Recent graduates' responses**

It has been found that, the responsiveness of training to local need is high, even though the attachment of training to local indigenous technology level is unknown and the sensitivity of training to local productivity (support of local productivity) is low, this is going in line with the point of view of McCrone, T., O'Beirne, C., Sims, D. and Taylor, A (2015) that different elements of contextualized learning suggest that contextualizing the teaching and learning in a meaningful way for the learner is a particularly important aspect of technical and vocational education, that means, the context in which vocational learning takes place, and/or the workplace the learning applies to, is critically important. This suggests that vocational (and technical) learning requires a substantial degree of sequencing of learning, with contextualization representing the critical layer (McCrone,

O’Beirne, Sims, & Taylor, 2015). Furthermore, study revealed that teachers have a highly consideration to relate the training to trainees needs, therefore, they try to connected always highly the training in real life during practical applicability, this is in line with Black and Yasukawa (2013) noted the importance of teachers and trainers being part of a community of practice where pedagogy fits with workplace practices of the jobs that learners want to take up(Black & Yasukawa, 2013). There is a high flexibility of training to accommodate need according to current situation. The study revealed that the involvement of stakeholder in the provision of training (serving target group) is unknown.

### **Trainers/Teachers responses**

The study here found that not only it is quite difficult for the trainers to contextualize the provision of training to local reality but also to prepare decentralized competence-based module, despite they really feel that it is interesting for them to provide practical training and very motivate and enthusiastic as TVET trainers.

Overall, trainers are qualified, very professional and very competent in their respective fields since they had received adequate trainings and still that their competence is adapted for this type of training by some adjustments made in order to permit the different trainers to upgrade their levels through different internships aimed at perfecting them on the different domains of competences. The overall findings, here, aligning little with the findings of Mvuh Zouliatou in her study about “TVET and Economic Development in Cameroon “in 2017, where she fund, Lack of qualified teachers is also due to limited number of professionals and lack of direct contact of teaching staff with industries and job market which does not enable them to update their knowledge with the transforming market for providing teaching relevant to the employment market. Also, teachers are accorded low status in Cameroon which makes TVET educators have less interest in pursuing any qualification, but rather prefer to do their own businesses(Zouliatou, 2017). Another author, S. MEGAN CHE (2007) in his study “Technical and Vocational Education in Cameroon and Critical Avenues for Development” mentioned that, one of his respondents (as teacher) elaborated, “For any teacher, you teach a child; your hope is that that child should do bigger things than you.”(Che, 2007)

## **Training Facilities**

For this objective, the researcher found that in general the training facilities Such workshop room, training tools, equipment and machine for your program, raw materials for practical exercise, training guides/trainees text book, electric power for practical exercise availability is just moderate and the study fund also there is not equal caring of stakeholders to the TVET situated in center city and those surrounding, in the city, VET institution are well equipped or have better lab than others surrounding even though some lab are full of oldest equipment and stools, in the countryside, TVET suffer not only for lowest budget, but mostly of lack of workshop or appropriate workshop as well as fluctuation or total absence of electric power. These findings are aligning with findings of Mvuh Zouliatou (2017) in her study “TVET and Economic Development in Cameroon” that, Technical and Vocational Education in Cameroon is confronted by many problems impacting on its education provision: lack or inadequate training infrastructures, inadequate training, mismatch between training delivered and the labor market needs, gender disparity, low efficiency in management are the main problems confronted. Statistically, Mvuh Zouliatou revealed that 57.2% of technical schools do not have any workshop; many tertiary colleges do not have functional laboratories; learning and teaching materials are old and 4.4% of schools are made up with make-shift materials. The existing infrastructures are inadequate and non-specialized, with insufficient maintenance. At the time of Information and Communication Technologies, 24% of secondary institutions, including TVET institutions, do not possess functioning computers available for students (National Institute of Statistics; 2010). Furthermore, In a research investigated in the “Expansion Policy of Secondary Technical Education as a Correlate to the Acquisition of Basic Technical Skills by Students in Cameroon”, Efande found that the available equipment in workshop in certain technical secondary schools were too old, furnished in the early sixties and mostly obsolete at the moment (Efande, 2015).

For financial support of TVET, the study found that TVET budget is quite not sufficient, which is in line with the statistics prove highly the lack of sufficient budget for TVET in Cameroon as revealed by some authors (Atayo, 2000 & Mvuh Zouliatou, 2017). For instance, Mvuh Zouliatou (2017), fund that, Cameroon does not have the required financial means to finance TVET at a level that can support quality training, the country’s expenditure on TVET is less than 3%, while this is on average of 15% in developed countries (Grijpstra, 2015).She found also that the management of TVET in Cameroun is dominated by a lack of transparency in finance, teacher recruitment, and

political interference(International, 2016). Financial transfer from the central administration to the regions and sub-divisions are low and inadequately managed. The funds provider (the central government to regional, then regional to TVET institutions) makes transfers without any clear system of reporting or accounting. She revealed also that Though TVET is seen as the main driver to the national economy in Cameroon, yet there is no national policy to provide a framework for value added and effective delivery. Thus, the established TVET institutions remain low and functioning in worst conditions.

From observations (real, documents analyses and check list) the researcher noted that only electric power; sports field; Staff/teacher; water supply were almost available in most of the institutions of the study And Telephone service and store, Cafeteria, library and toilet facilities were fund to some fewer, especially in the TVET institutions located in the center of city. Whereas Internet services and road services are totally, absent in all the institutions. These situations were justifying by Shobhana Sosale and Kirsten Majgaard (2016) in their study titled “Fostering Skills in Cameroon” where they found that, Though TVET is seen as the main driver to the national economy in Cameroon, yet there is no national policy to provide a framework for value added and effective delivery. Thus, the established TVET institutions remain low and functioning in worst conditions(Sosale, 2016). Additionally, Mvuh Zouliatou fund that the wasting of resources in turn contributes to reduced investment in schools and classrooms equipment, offices and, insufficiency in teaching and learning infrastructures.

### **The extent of training offerings and assessments (extent of linkages between TVET institutions & enterprises, achievement in competence and graduate employability)**

#### *Linkages between TVET institutions & enterprises*

For this objective relative to linkage between TVET institutions and SMEs, the study revealed that, almost totality of institutions has a relationship with local SMEs and this link, focuses service offerings, SMEs grant traineeship to the TVET learners and offer guided visit to the company but findings revealed that that the relationship is not yet regulated by any legal framework (informal), there is no official link yet. It is quite necessary for better management of the trainees to make it formal and it is necessary to allow a least of support to these SMEs, in order to motivate them for better result for the learners. Additionally, the study found that there is not a suitable follow-up and support from the institution and local enterprises for graduate’s employability. It is quite

difficult for due to the government policy and their levels as small or medium enterprise. This is in line with the findings of Mvuh Zouliatou (2017), she found that, there is a weak relation between the training delivery in the TVET system in Cameroon and labor market needs. She Research shown that TVET in Cameroon does not adequately provide the qualification required by the world of work. This disconnection is a major reason for the high youth unemployment in the country as the gap between TVET system and its target to reduce unemployment continues to widen. Furthermore, World Bank (2015b), Pointed to the mismatch include a general lack of practical training elements in courses, and the low involvement of the private sector in TVET training as well (Bank, 2015b).

### **Competence Certification Assessment**

Findings about the statement relative to the competence assessment in the different TVET institutions, the competence assessment is seen as globally acceptable (just good) but there is a lot of effort to do, since first the examination process is not in favor for the learners to get high grade, because exam often take just few days and for huge courses, so that means sometime more than 3 courses on the days. Beside this still that some teachers provide sometime strong and large exercises, others don't provide the necessary time to cover the evaluations, with strong exercises and too long. This revealed the lack pedagogical assessment skills to these types of teachers. Overall, the learners are qualified for the job market at the end of the program. With the introduction of the training internship at the end of the program, the competence level will be improved and mostly compensated biased on the demands and needs of the structures receiving the trainees.

### **Employability of the TVET Graduate Trainees**

Regarding this statement about employability, it has fund that the employability rate of TVET learners in general is less likely or can be just considered as quite difficult to judge even though for the TVET stakeholders, all the graduates have an equal chance to be recruited somewhere (private companies or organization, NGO, government or by creating their own micro-enterprises.), since they are professional and qualified to adapt themselves to the need of their recruiters. However, nowadays, socio-professional insertion is quite difficult and complex due to the number constantly increasing of graduate each year to the workplaces growing (NGO, governmental, few SMES...) and the amazing thing is that the employment area is quite complex,

but most of the times, young graduates have to go for pre-employment methods, so as to just judge their competence which is not guaranty any for the employment of the pre-employee , some dishonest enterprises chiefs take this opportunity to exploit some graduate and after long period just release them. And this situation is escalated by many other factors such as corruption issue; high taxes, country policies that are not in the favor to attract more both national and international investors. The study revealed also that, some of the recent graduates since 2014 are still jobless. Those who are got job most of them work for the government mainly as a teacher, just fewer joint private organization and insignificant of them tried with a lot of effort and build their own business after one year or more than, still that is quite difficult for them to run their SEMs and to stand due to taxes and some others factors. Finally, the study depicted that there is not real following-up from TVET institution, neither from SMEs to support graduate employability. These findings concerning employability in Cameroon, were depicted by Shobhana Sosale and Kirsten Majgaard (2016) in their study “Fostering Skills in Cameroon”, where they found firstly, micro, small, medium-size, and large enterprises are concentrated in Douala (35.1 percent) and Yaoundé (23.9 percent), followed by the West, South-West, and North-West regions whereas, north regions accounted only 3.10%, the majority of enterprises and workers in Cameroon are in the informal sector and. Entrepreneurs say that most of the barriers they face relate to the business environment: practices in the informal sector, high taxes and a difficult tax regime, widespread corruption, problems accessing credit, excessive bureaucracy, unfair competition, poor infrastructure, high financing costs, little or no informal dialogue to promote collective action, weak energy and water systems, transportation challenges, a cumbersome judicial system, problems with training and skills, and inadequate labor legislation. As a result, Cameroon is not competitive in global markets. They found secondly that, the main obstacles in finding employment in Cameroon, include lack of available jobs and lack of work experience, followed by unsuitable vocational education, discriminatory prejudices, and poor working conditions in available jobs since, the education received by 67 percent of the public sector employees did not adequately prepare them for their current job. Young people expressed concern about the economic situation of the country, which undermines their opportunities for future employment. Similarly, according to the respondents, there are not enough jobs in the market, which was identified as the main reason they are unemployed or not looking for jobs. Finally, Shobhana Sosale and Kirsten Majgaard depicted that, Forty-three percent of those who are self-employed received no help and used their personal

savings to start their business and the two most important problems that self-employed youths face are problems with Internet service and insufficient training to prepare them for their jobs. Again, regarding this unemployment issue, S. MEGAN CHE in 2007, mentioned that, many Cameroonians who are educated abroad and return to their country couldn't find suitable employment. As these people return abroad in search of careers, the 'brain draining' in Cameroon is exacerbated.

### **5.1.3 The Prospects of TVET from Different Perspectives.**

For this last objective, which was to find out the main policy relative to the TVET prospection in the northern region of Cameroon, the work laid down some points for the better prospection in the future such:

- ✓ TVET curriculum reform should be more focused on local needs or on the technical skills required by local SMEs; the practical activities and internship duration should be increase and dropping down of some mismatching subjects with field that make the program huge in term of courses as well as review competency assessment as international standard.
- ✓ News field or specialties: news or innovation sector need to be created in all TVET sector, so that TVET will more impact in the local society as well as drop down the rate of employability.
- ✓ More resource and financial support or budget: The stakeholders from both government and NGOs, more effort in providing raw materials, financial support or budget for better result in practice courses and internship.
- ✓ Official link with local SMEs: the authorities should think for making the relations between TVET institutions and local SMEs official, so that that the current gab skills rate between skills provided and skills need by SMEs will be reduced considerably.
- ✓ Increase the number of trainers: there is a huge need of trainers compared to the number of trainees which is growing each year; there is a lack of qualified trainers in many fields.
- ✓ Equip and update Labs: it is one of important factors for better quality practice skills, it is quite indispensable to not only equip all the lab of different specialties but also regularly to update them, training will follow the advanced technology and skills change require for labour market and graduates will be competitive in the socio-professional area.

#### 5.4 Conclusion

The aim of the study was to investigate on how well TVET in the North region of Cameroon is currently implemented and what its fate will be, in order to reveal a clear picture of its current situation and recommend improvement for the future. Based on the different findings above the following conclusion can be laid down:

Despite that most of the students (current and graduate) are satisfied to be a part of TVET system and training is provided based on the official program or training standards and documents proposed by the ministry of employment and vocational training (MINFOPRA) and the ministry of secondary education (MINESEC), without doubt there are a lot of effort concerning TVET assessment mostly regarding quality of practices during training which for now is dealing with some issue as materials, tools work, teachers number and qualification ,electric power fluctuation and so on

Majority of students join TVET institutions according to their wish but they are aware of the future of TVET, which can enable them to fulfill their dream and build their carrier in their favorite field such engineering, Technician, manager, create their own SME, just insignificant number of them enroll according some fact such Family with, friends, Age, or imitations. Student are almost assigned to the specialty which they were interested despite this is sometime relative to the availability of places (seats) in the selected field of study as well as the availability of the that field in the institution. The awareness about admission is done through radio communication and under a competitive entrance examination or by case-study of the files of candidates (documents such as transcript, cumulative grade point average (CGPA), background...etc.) and the Announcements are launched in order to attract the awareness of everyone about the entrance examination into the TVET institution. The issue here is that TVET is so expensive that normal general education, as a result TVET institution have lowest enrollment each year compared to the general education. Mostly the north region is one of the regions with high rate of farmers, and more jobless people since most of SMEs and large enterprises are concentrated in the capital Yaoundé and Douala.

Overall, trainers are qualified, very professional and very competent in their respective fields according to what they had received during their trainings and still their competence is adapted for this type of training by some adjustments made in order to permit the different trainers to upgrade their levels through different internships aimed at perfecting them on the different domains of competences. However, there are a limited number of qualified teachers and trainers, the



adjustment internship program to update the competence is not implemented well and the opportunities are not giving to all teachers and trainers, just few are getting the opportunity. In addition, teachers are accorded low status in Cameroon that makes TVET educators have less interest in pursuing any qualification, but rather prefer to do their own businesses beside this one to raise their monthly earning in order to survive and support their families.

The main problem concerning TVET in Cameroon, we cannot deny is the issue of training facilities. Training facilities are the keys point, for effectiveness efficiency, indispensable competency achievement, and relevance of the program. TVET in the North region of Cameroon as in whole country deals with lack or inadequate training infrastructures, inadequate training, mismatch between training delivered and the labour market needs, gender disparity, low efficiency in management are the main problems confronted. In fact, some of technical schools in the countryside do not have any workshop; some tertiary colleges do not have laboratories well equipped, even they are equipped, they are full of oldest materials and tools. The existing infrastructures are inadequate and non-specialized, with insufficient maintenance. At the time of Information and Communication Technologies, still that most of secondary institutions, including TVET institutions, do not possess functioning computers available for students. The problem of electric power. And the main drawback, is a financial issue, that TVET budget is quite not sufficient, very low compared to general education, accented by an embezzlement of fund during it transfer the central administration to the regions and sub-divisions. For others facilities, sports field; Staff/teacher; water supply is almost available in most of the institutions of the study, However, Telephone service and store, Cafeteria, library and toilet facilities are just available in some famous TVET institutions in the center of the city but they are almost absent in the rural institutions.

Almost all institutions have relationship with local SMEs and this link, focuses service offerings, SMEs grant traineeship to the TVET learners and offer guided visit to the company. However, relationship is not only yet regulated by any legal framework (informal), but also there is not follow-up and support from the institution and local enterprises for graduate's employability.

Competence assessment is seen as globally acceptable but there is a need to follow the international standard, effort need to be done concerning evaluation duration, which in disfavor of students since the in the current exam schedule, exam often take just few days and for huge courses

average on the days. Beside this still that some teachers provide sometime strong and large exercises, others don't provide the necessary time to cover the evaluations, with strong exercises.

It is quite difficult to predict the employment of any graduate nowadays, the employability rate of TVET learners is going down each year, the number of unemployed graduate year by year despite TVET stakeholders, all the graduates have an equal chance to be recruited somewhere (private companies or organization, NGO, government or by creating their own micro-enterprises.), and they gusseted graduate are professional and qualified to adapt themselves to the need of their recruiters. The socio-professional insertion is quite difficult and complex due to the number constantly increasing of graduate each year compared to the workplaces growing (NGO, governmental, few SMES...), there are only around 3% SMEs and large enterprises in the north region. For those graduates who opt for self-employment, not only they do not get any help and used their personal savings to start their business but also, they face the barriers related to the business environment: practices in the informal sector, high taxes and a difficult tax regime, widespread corruption, problems accessing credit, excessive bureaucracy and so on. Finally, there is not real following-up from both sides, TVET institution, neither from SMEs to support graduate employability.

### **5.5 Recommendations**

Based on the findings, and conclusion on “The Current State of Practices of Cameroon TVET Institutions: Case of Northern Region of Cameroon “, the researcher had made the following recommendations as they may play a vital role de development and improvement of the quality of TVET quality:

- ✓ TVET stakeholders, governing body and non-governmental agencies should provide adequate fund or budget in order to equip the existing lab with update equip, to build lab where there is lack, to obtain necessary raw material for practices exercises.
- ✓ Government must as soon as, think to make the relationship between TVET and SMEs or large enterprises official with legal law and think to motivate SMEs involve in the students' internship program.
- ✓ Government and society should give have a good mind towards teachers and look how to improve their status as well as raise their wages for better result of TVET.

- ✓ TVET administrators (MINFOPRA, MINESUP and MINSEC...), should think how to decentralize TVET assessment needs and curriculum according to the specific context and real needs workforce of each region or locality instead of national one.
- ✓ Stakeholders should make effort give the equal caring Towards TVET institutions as general education and giving equal attention to both urban TVET institutions and rural TVET institution.

## **5.6 Suggestions**

As a means to address the issue well, it is suggested that further studies may be conducted in this area with regards to the attitude of the trainees and the society towards TVET.

TVET institutions should conduct proper needs assessment as basis for providing need-based training so as to keep the relevance of training to local needs which can eventually enhance the quality of training which would lead to acquire successful trainees in the world of work.

## References

- Agrawal, T., & Agrawal, A. (2017). Vocational education and training in India: a labour market perspective. *Journal of Vocational Education & Training*, 69(2), 246-265.
- Armstrong, M., & Taylor, S. (2014). *Armstrong's handbook of human resource management practice*: Kogan Page Publishers.
- Aswathappa, K. (2005). *Human resource and personnel management*: Tata McGraw-Hill Education.
- Atayo, A. J. (2000). *Cameroon educational system*: Loving World Pub. House.
- Baker, V. J. (1989). Education for its own sake: the relevance dimension in rural areas. *Comparative Education Review*, 33(4), 507-518.
- Bank, W. (2001). . (2001). revisiting technical and vocational education in sub-Saharan Africa: An update on trends, innovations and challenges. *Paris, IIEP/Prg. DA/01.320*.
- Bank, W. (2008). *Linking education policy to labor market outcomes*. Paper presented at the. Washington DC 20433, . Washington DC 20433.
- Bank, W. (2010). South-South Study Visit to CHINA and INDIA CAMEROON. Retrieved from.
- Bank, W. (2015b). Republic of Cameroon Skills, Fostering Inclusive, for Development, Workforce Action, Framework for action.
- Black, S., & Yasukawa, K. (2013). Disturbing the Pedagogical Status Quo: LLN and vocational teachers working together. *Pedagogies: An International Journal*, 8(1), 44-59.
- Bryan, C. (2017). “*The Girl Who Stood Up For Education and Was Shot by the Taliban*”: A Comparison of Narratives between Articles in UK and US News Websites with I Am Malala. University of Stavanger, Norway.
- Che Kum, C. (2010). *Technical and Vocational Education in Cameroon: The way forward. Paper presented at an International Conference Organized by the Cameroon Professional Society; Hilton hotel, .* Paper presented at the Baltimore, Maryland, USA.
- Che, S. M. (2007). Technical and vocational education in Cameroon and critical avenues for development. *Research in Comparative and International Education*, 2(4), 333-345.
- David, A. M., & Nordman, C. J. (2017). Skill mismatch and migration in Egypt and Tunisia.
- Delluc, A. D. A. M. (2001). Revisiting technical and vocational education in sub-Saharan Africa: an update on trends, innovations and challenges. *Paris: IIEP/Prg.DA/01.320 Rev*.
- Efande, L. J. (2015). Expansion Policy of Secondary Technical Education as a Correlate to the Acquisition of Basic Technical Skills by Students in Cameroon. *Journal of Education and Practice*, 6(35), 8-16.
- Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations: Needs assessment, development, and evaluation*: Wadsworth/Thomson Learning.
- Hirche, W. (2012). Involving the young: The German approach to vocational education. *Journal of Education for Sustainable Development*, 6(1), 115-120.
- International, T. (2016). Transparency International-Cameroon. Retrieved from <https://www.transparency.org/country/CMR> *Research in Comparative and International Education* (Vol. 2, pp. 333-345).
- Jayaram, S., & Engmann, M. (2017). Diagnosing the Skill Gap *Bridging the Skills Gap* (pp. 1-14): Springer.
- Jayaram, S., Munge, W., Adamson, B., Sorrell, D., & Jain, N. (2017). *Bridging the Skills Gap: Innovations in Africa and Asia* (Vol. 26): Springer.

- McCrone, T., O'Beirne, C., Sims, D., & Taylor, A. (2015). *A Review of Technical Education. Slough, London: National Foundation for Educational Research.*
- OECD. (2013). *The skills needed for the 21st Century.*
- Placklé, I., Könings, K. D., Jacquet, W., Struyven, K., Libotton, A., van Merriënboer, J. J., & Engels, N. (2014). Students' preferred characteristics of learning environments in vocational secondary education. *International Journal for Research in Vocational Education and Training (IJRVET)*, 1(2), 107-124.
- Rowe, N., Wilkin, A. and Wilson, R. (2012). Mapping of Seminal Reports on Good Teaching (NFER Research Programme: Developing the Education Workforce). Slough: NFER [online]. Available: <http://www.nfer.ac.uk/publications/RSGT01> [2 September, 2015].
- Rus, R. C., Yasin, R. M., & Rasul, M. S. (2014). From zero to hero: Becoming an employable knowledge worker (k-worker) in Malaysia. *TVED@ Asia*, 3, 1-16.
- Sosale, S., & Majgaard, K. (2016). Fostering Skills in Cameroon: Inclusive Workforce Development, Competitiveness, and Growth. . *The World Bank.*
- UNESCO. (1999). *Lifelong learning and training. A bridge to future.* Paris: UNESCO.
- UNESCO. (2015). *Revision of the 2011 Revised recommendation concerning TVET.* Paper presented at the UNESCO.
- UNESOC. (2009). *Strategy on technical and vocational education and training (TVET).* . Paper presented at the International consultation meeting on TVET, Bonn.
- Union, A. (2007). *Strategy to revitalize technical and vocational education and (TVET) in Africa.* Addis Ababa, Africa-Union.Org.: The World Bank.
- Wanjau, K., & Muthiani, M. (2012). Factors influencing the influx of counterfeit medicines in Kenya: A survey of pharmaceutical importing small and medium enterprises within Nairobi. *International Journal of Business and Public Management*, 2(2), 23-29.
- Weßling, K., Hartung, A., & Hillmert, S. (2015). Spatial structure counts: the relevance of regional labour-market conditions for educational transitions to vocational training. *Empirical Research in Vocational Education and Training*, 7(1), 12.
- Zouliatou, M. (2017). TVET and Economic Development in Cameroon: Lessons from China. *Journal of Education and Practice.*

## APPENDIX A



الجامعة الإسلامية للتكنولوجيا  
UNIVERSITE ISLAMIQUE DE TECHNOLOGIE  
ISLAMIC UNIVERSITY OF TECHNOLOGY  
DHAKA, BANGLADESH  
ORGANISATION OF ISLAMIC COOPERATION



25 May 2018

Sub : Supply of necessary information for M.Sc. in Technical Education student of Islamic University of Technology (IUT) for conducting research work.

Dear Sir,

Mahonde Daoudou Pascal, Student Number 161031207, Nationality of Cameroon, Student of Master of Science in Technical Education (M.Sc.T.E.) with specialization in Electrical and Electronics Engineering of the Islamic University of Technology (IUT), Organization of Islamic Cooperation (OIC) is conducting research work as partial fulfillment of the requirements of his degree. He is conducting research on “The Present state of Practices and Prospects of Technical and Vocational Education and Training (TVET) in Cameroon.” For his research work, he needs data.

It will be highly appreciated if you could kindly extend your sincere cooperation by providing necessary data (information, documents, publications, bulletins, or brochures) available in your organization to Mahonde Daoudou Pascal. Let us assure you that the information provided would not be used for any other purpose except the research work and the confidentiality of the documents will be maintained.

Thanking you in anticipation of your cooperation.



Yours sincerely,

Prof. Dr. Che Kum Clement  
Head, TVE Department

BOARD BAZAR, GAZIPUR-1704, BANGLADESH

Tel : 9291250, 9291252 PABX : 9291254-59 Fax : 880-2-9291260 e-mail : vc@iut-dhaka.edu website : www.iutoic-dhaka.edu

## APPENDIX B

**Table 1:** The trainers' competence in the provision of training.

No.	Items related to trainers' competence	Scale of option				
		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
A	The trainers provide the training in depth by contextualizing with local reality (knowledgeable)					
B	Trainers are capable enough in providing practical training (skillful)					
C	Trainers are enthusiastic for the training they provide (have positive attitude)					
D	The trainer is resourceful in preparing teaching-learning resources					
E	The trainers have high expectations for their trainees' achievement					

**Table 2: status of institute’s facilities.**

No.	Items related to institute’s facilities	Status of your institution facilities		
		Sufficient enough	Moderate	Not sufficient
A	The sufficiency of workshop room			
B	The availability of relevant training tools, equipment and machine for your program			
C	The sufficiency of raw materials for practical exercise			
D	The availability of training guides/trainees text book			
E	The existence of electric power for practical exercise			

**Part: Observation checklist**

1. The observation of institutional facility

No	Existence of basic facilities in the institution	Availability	
		Present	Not Present
	Electric power		
	Telephone services		
	Internet services		
	Water supply		
	Road services		
	Library		
	Toilet		



	Cafeteria		
	Staff/teacher		
	Sports field		
	Store		

## 2. Observation of practical training

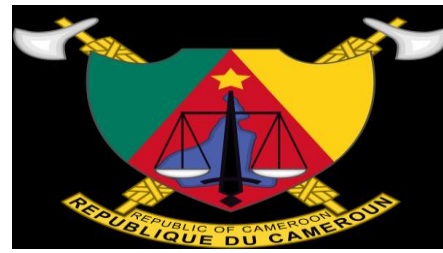
- Material fulfilment
- Working environment
- Trainers and trainees' readiness

### **Part: Document analysis guide**

1. Document on training need identification
2. Tracer study document
3. The trainee's admission and graduation document
4. Documents on collaboration work with local enterprises

## APPENDIX C

### Cameroon and the Localization of the Northern Region



**Population:** 23,344,000 (UNESCO-UNEVOC, 2015)

**Youth population:** 4,733,000 (UNESCO-UNEVOC, 2015)

**Median population age (population aged 14-25):** 18.5 (UNESCO-UNEVOC, 2015)

**Annual population growth:** 2.1% (République du Cameroun, 2010-2015)

**Area:** 475,442 square kilometres (183,569 sq mi), 53rd largest in the world.

The Republic of Cameroon, nestled between West and Central Africa, covers an area of 183,520 square miles and shares borders with Chad, Gabon, Equatorial Guinea, the Central African Republic, and Nigeria. The population total in Cameroon was 23,439,189 in 2016. Cameroon's coastline lies on the Bight of Biafra, part of the Gulf of Guinea and the Atlantic Ocean.

French and English are the official languages of Cameroon. The country is often referred to as "Africa in miniature" for its geological and cultural diversity. Natural features include beaches, deserts, mountains, rainforests, and savannas. The highest point at almost 4,100 metres (13,500 ft) is Mount Cameroon in the Southwest Region of the country, and the largest cities in population-terms are Douala on the Wouri river, its economic capital and main seaport, Yaoundé, its political capital, and Garoua. The country is well known for its native styles of music, particularly makossa and bikutsi, and for its successful national football team. At 475,442 square kilometres (183,569 sq mi), Cameroon is the world's 53rd-largest country. (Wikipedia)

Young people represent more than 50% of the population. It is expected the demand for education will increase. The urban population has grown at an accelerated pace from 14% in

1950 to 58% in 2010. This trend is expected to continue between 2010 and 2020. Figure below shows the 10 subdivisions of Cameroon. The population is unequally distributed over the territory. This contributes towards education inequality.

**Figure: Map of Cameroon with its ten regions**

