

Unlocking Graduates' Employability: The Case of Technical High School Graduates of the Diamaré Division, Far North Region, Cameroon

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Abstract The 21st century job market has become very competitive and exigent, as it commands relevant and quality skills as the main prerequisite for graduates to obtain gainful job positions. It therefore becomes imperative for formal education and training institutions to rethink and reshape their skill development plans, strategies, and actions, in order to squarely respond to the challenging needs imposed by this permanently evolving labor market. This means that graduates smooth transition and being maintained in a gainful job position in today's labor market could be hampered if they are not in possession of the right skills. Using Government Technical High school (GTHS) graduates undergoing further training at the National Employment Fund (NEF), this paper investigated the extent to which Technical, Vocational Education and Training (TVET) Inputs in GTHS Maroua and SALAK influence graduate employability in the Diamaré division. TVET inputs were understood in terms of educational policy implementation, curriculum, infrastructures, and partnership. The methodology consisted of a mixed design, data was collected through likert scale questionnaires, and semi-structured interviews. The multi-regression was used to determine the degree of association between variables. The results revealed that, at an alpha level of 0,05, all four TVET inputs are statistically significant predictors of graduate employability in the Diamaré. This means that technical high school graduates will continue to swell unemployment and underemployment figures if TVET inputs in these schools are not revitalized. Suggestions called for the adaptation of policy definitions and curriculum to local realities, enforce policy implementation, increase finances to obtain quality basic and workshop infrastructures, and to engage in systematic volunteerism, and an equilateral partnership between government- training schools-business world.

Keywords: TVET, graduate employability, policy implementation, curriculum, infrastructure, partnership

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1. Introduction

Technical, Vocational Education and Training (TVET) is increasingly being recognized as having an important role to play in tackling graduate employability problems and youth unemployment around the world in general [1] ILO (International Labor Organization). This has been justified by the fact that TVET is concerned with the acquisition of knowledge and skills for the world of work, enabling graduates to increase opportunities for productive tasks, sustainable livelihoods, personal empowerment and socio-economic development (Maclean, Wilson, et al, 2009, cited by Kingombe, [2]). Also, De Largentaye [3] recalls that TVET is a key solution to the graduate employability dilemma for the current generation. In other words, there is an international agreement on the fact that

TVET renders graduates more employable as they have received broad-based education and training, basic and portable high level skills, including teamwork, problem-solving, information communication technology, and communication and language skills. It follows that a combination of such skills enables them to adapt to the changes of the new knowledge based economy [1,4-11]. UNESCO (United Nations Educational and Scientific Cultural Organization), UNEVOC (UNESCO's Vocational Education), OECD (Organization for Economic Cooperation and Development).

Despite this conviction that TVET is a sustainable solution to graduate employability worries, technical high school graduates are still trapped in the dragnets of underemployment, low quality jobs, working poverty, temporal employment and total unemployment, while some are not engaged in education nor training. This question of graduate employability has increasingly

become a major concern around the world begging for an answer as to whether our formal education institutions are responding to the challenges posed by the 21st century labor market and the new knowledge based economy. The youths who make up 18% of the world's population and 15% of the global labor force are the most affected by this ugly situation [6]. The ILO reports for 2016 and 2017 corroborate the above premise. Statistics show that global youth unemployment trends climbed to 13,1% in 2016, and this level was maintained in 2017, largely different from 12,9% obtained in 2015, and slightly different from the historic peak in 2013, at 13,2%. Of this world statistics, developed countries recorded the highest rate with 14,5% in 2016, though anticipations depicted a mild recovery to leave this figure at 14,3% in 2017.

This phenomenon has become more acute in developing countries in particular as the same ILO report explains that the number of unemployed youths and graduates steadily constitutes between 11,1 to 11,6 million in sub Saharan Africa from 2015 through 2017. In Cameroon, 4,2% of the active labor force is currently unemployed. Worst is the fact that one-third of youths in the emerging and developing countries are trapped in moderate or abject poverty despite having a job, a strong indication for the high incidence of low-quality jobs among the employed youths (ILO, Ibid). In effect, an estimated 17.1% of youths are living in extreme working poverty as of 2016, constituting 70million youths, while the number is raised to 156million if those in moderate poverty are included. In northern Africa, one out of every four youths live in extreme or moderate working poverty, while sub-Saharan Africa carries the bulk as it was 70% in 2016, and 80% in 2017 [1].

Most disturbing is the fact that a greater portion of these youths who are job seekers have attended school for varying lengths of time, have obtained certificates, and diplomas, and yet are unable to find jobs that match their aspirations, their potential abilities, and/or cannot be absorbed by the job market at all. The tendency is that most of these graduates for the sake of bread are left with no choice than to go for underrated and poorly paid vacancies. A phenomenon termed by professor Callaway [12] as underemployment, when he observed in most African countries that increasing numbers of secondary school graduates flood into informal farm activities, while a handful were trapped in illegal hawking in urban markets. In Cameroon in general, the Underemployment situation is estimated at 7 on 10 individuals (71,7%). It is more acute in rural centers (78,8%), with (57,4%) in urban centers (GESP, [13], p.44).

This problem is compounding in the Diamaré division as approximately 35% of the population is unemployed, about 75% is trapped in informal employment and/or underemployment. Of these statistics, youths and young graduates constitute the bulk: approximately 55% [14]. These figures tie with the observation that Government Technical High school graduates (GTHS Maroua and GTHS Salak) are trapped in the drag nets of underemployment, low quality jobs, skills mismatch, difficult school-to-work transition, working poverty, and total unemployment. Others have registered with the National Employment Fund (NEF) to upgrade

their skills so as to increase their chances of being absorbed into the job market [15]. As a matter of fact, most of these graduates were observed parading the neighborhoods in possession of scroll drivers, pliers, hammers, trowels, building buckets, spades, and related tools, ready to offer repair services in homes just to get some francs to afford bread (Field observation by researchers). An exceptionally ugly situation that motivated this paper.

This study seeks to investigate the extent to which TVET influences graduate employability in the Diamaré division. To this, TVET has been operationalized in terms of educational policy implementation, curriculum relevance, basic and workshop infrastructure, and partnership between technical schools and the world of work, all in relation to graduate employability. In effect, this study seeks to investigate the extent to which TVET educational policy implementation, TVET infrastructures (basic learning infrastructures, industrial or workshop infrastructure), the curriculum, in terms of development, relevant content, and delivery approach, and partnerships between the schools and the business world, are significant predictors of graduate employability problems observed in the Diamaré.

1.1. Research Objectives

1.1.1. Main Research Objective

- To investigate the extent to which TVET inputs in Government Technical High schools influences graduate employability in the Diamaré Division.

1.1.2. Specific Research Objectives

- To investigate the extent to which TVET Educational policy implementation in Government Technical High schools influence graduate employability in the Diamaré Division.
- To verify the extent to which TVET curriculum in Government Technical High schools influences graduate employability in the Diamaré Division.
- To examine the extent to which Basic TVET learning and workshop infrastructures in Government Technical High schools influence graduate employability in the Diamaré Division.
- To investigate the extent to which partnerships between Government Technical High schools and the world of work impact graduate employability in the Diamaré Division?

1.2. Research Hypotheses

1.2.1. Main Hypothesis

- TVET inputs in Government Technical High schools influence graduate employability in the Diamaré Division.

1.2.2. Specific Hypotheses.

- Hypothesis 1.

- **RH:** TVET educational policy implementation in Government Technical High schools significantly

influences graduate employability in the Diamaré Division.

- **Null:** TVET educational policy implementation in Government Technical High schools does not significantly influence graduate employability in the Diamaré Division.

Hypothesis 2.

- **RH:** there is a significant relationship between curriculum content in Government Technical High schools and graduate employability in the Diamaré Division.
- **Null:** there is no significant relationship between curriculum content in Government Technical High schools and graduate employability in the Diamaré Division.

Hypothesis 3.

- **RH:** Basic TVET learning and workshop infrastructures used in Government Technical High schools strongly predicts graduate employability in the Diamaré Division.
- **Null:** Basic TVET learning and workshop infrastructures used in Government Technical High schools does not predict graduate employability in the Diamaré Division.

Hypothesis 4.

- **RH:** partnerships between Government, Technical High schools and the world of industry significantly correlate with graduate employability in the Diamaré Division.
- **Null:** partnerships between Government, Technical High schools and the world of industry do not correlate with graduate employability in the Diamaré Division.

2. Literature review and critical analysis.

2.1. Analyzing the State of TVET

At the wake of the 18th century, TVET had grown big in Europe and advanced nations around the world, thanks to the industrial revolution that exploded in Great Britain, where the steam engine and the first spinning machines were invented (European journal on vocational training, 2004). As a result, countless people left the rural areas to settle in the cities so as to supply labor needed by growing factories. This era of industrialization rapidly swept across Europe, the united states and in developing countries as well since powerful nations intensified colonial activities in search of raw materials and manual labor needed by their industries back home (European journal on vocational training, *ibid*). Also, the high demand for technical and vocational skills by these factories imposed sweeping reforms in school curricula in these countries with specific changes directly related to technical and vocational skills required by these industries.

In Africa, TVET can be traced back to African traditional education which had as objective to prepare youngsters for adult roles in the society [16]. However, African traditional education was interrupted by the arrival of the western missionaries and European business men as early as the 16 and 17 centuries, while the colonial race completed the show in the 18 and 19 centuries to

implant what exist today in most African countries as formal educational systems. Nevertheless, most of these formal educational systems, particularly those in French Africa mainly centered on general education than TVET [17].

In Cameroon, TVET, known in its French appellation as L'Enseignement et la formation Technique et Professionel has as objective to train a vibrant workforce for various employment sectors, and increase understanding of technology. It equally aims at training Cameroonians as responsible citizens (UNESCO-UNEVOC, Cameroon, [5]). In Cameroon, TVET is found both in the formal and non-formal/Informal sectors of education. Formal TVET is divided into cycles which are the first cycle of the technical secondary is, which lasts for four years with a CAP certificate (certificate d'aptitude professionnel), while the second cycle lasts for three years with a high school technical diploma. These institutions are sparsely spread around the country mostly in divisional headquarters, and supervised by MINESEC [18]. Non-formal TVET programs are provided by various Ministries (Agriculture, Culture, Employment and vocational Training. However, this study is situated in Formal TVET system.

TVET Teachers are trained by HTTC (Higher Technical Teachers' Training colleges), whereas others from GTTTC (Government Technical Teachers' Training Colleges). The former trains high school teachers, while the latter trains lower technical secondary teachers. Moreover, financing in these schools mostly comes from the government, while some external bodies may also give a helping hand. Some challenges faced by these schools include: insufficient and poor infrastructures, insufficient finances, non-adapted curricula, just to name these few. It is based on the analysis made above that this type of formal education becomes a major concern for policy makers and educational planners. Internally, major policy orientations have shaped TVET landscape and its role in addressing graduate employability problems. These various strategies and policies related to TVET in Cameroon include:

- The Education Plan for 2013-2020 is a study on the development and improvements in the field of TVET in Cameroon. The Plan, amongst other things, calls for the expansion of TVET and the diversification of TVET programs.
- The Vocational Education Strategy 2008 was validated by the Ministry of Employment and Vocational Education (Ministère de l'Emploi et de la Formation Professionnelle) (MINEFOP) in 2008.
- The GESP (Growth and Employment Strategy Paper).
- The YNSAP (Youth National Strategic Action Plan).

UNESCO-UNEVOC-Database-Cameroon [5].

2.2. The State of the Job Market in Cameroon

The global economic crisis in the late 80s left the Cameroon economy on its knees by splitting the salary of workers by 50% Fonkeng and Ntembe [19] present a clearer picture on this crisis as they observed that: "most

industries had to short down, as the government embarked on a wide privatization policy of state owned enterprises. As a matter of fact, most Cameroonians went unemployed, the rate of underemployment increased as a larger part of the population could only survive through hand-to-mouth agriculture, whereas extreme poverty became the order of the day". This situation became more complex with the devaluation of the France CFA in 1994, which resulted to unbearable inflation and corresponding consequences. Since then, Cameroon has embarked on various measures, most particularly through education (formal and non-formal) to fight this crisis, though recovery is slow. To this, the (CIA: Central Intelligence Agency, World fact book, [20]) noted that there has been a sharp increase in the creation of higher education institutes, education and training institutes to prepare young Cameroonians for the job market. This report further underscored that the "professionalization" of secondary and higher education in Cameroon has remain a political slogan, otherwise, the curriculum and teaching methods are still fashioned to hit theoretical and academic targets. It therefore follows that it would not sound funny as we find secondary/high school, and university graduates for example, with a diploma in accounting who cannot work on excel, sage sari...etc. the truth of the matter is that most of these graduates litter in the streets doing odd jobs, and illegal hawking, while others still nurse hopes for the government to recruit them.

The private sector which required sharing this responsibility is yet to gain considerable maturity as she is battling between discouraging taxation policies practiced by the government, and weak state regulation and organization. To this, (CIA World fact book, [20]), explains that some graduates with entrepreneurial initiatives are immediately hushed down by the taxation practices of the government. Another flank of the debate paints an unsatisfactory picture in the phenomena of voluntary services and internships which should have been an excellent bridge in enhancing graduate employability and integration in the job market, (CIA World fact book, [20]). Until today, volunteerism remains a scarce commodity between training and the job market as most graduates have spent 5 and more years after leaving school, but with no work experience to show for. This often limits their chances for job positions when they stumble on job vacancies because most employees would always associate the latter to relevant skills as an intake criterion. Worst is the fact that these graduates lacked internship programs during schooling.

By the end of 2017, the labor force in Cameroon was estimated at 9,912, 000, (CIA World fact book, [20]). Same document reported that 6.4% of the unemployed and underemployed as earlier presented falls within the ages of 15 -24. With a net country population of over 20million inhabitants, the government stands very tall as the main employer with over 200,000 people recruited in the public service. It therefore means that the remaining 11,8million should be a call for concern. Characterized by this morose job market situation, persons with low employable skills continue to inflate the informal market sector in Cameroon while unemployment is on the rise. According to the International Labor Bureau, 80% of workers occupy this

sector in developing countries [21]. It therefore follows that the Underemployment situation in Cameroon is estimated at 7 on 10 individuals (71,7%). It is more acute in rural centers (78,8%), with (57,4%) in urban centers (Growth and Employment Strategy Paper: GESPP, [22], p.44). this aspect is presented as the core to the problem of the job market in Cameroon. In the main, the youths and young graduates constitutes the bulk 6.4% of the population trapped in this sad situation (unemployment and underemployment) as it is the case in the Diamaré Division (approximately 55%). The billion and one-dollar question is: where is the country heading to, with such a morose job market situation?

2.3. The Link between TVET and Graduate Employability

The link between TVET and graduate employability has been confirmed to be a positive one. Whilst, this subject has been at the center of most studies thanks to the UN's permanent call on governments since its inception in 1945 to adopt TVET as a priority education since it has been tested and confirmed to be a proxy for coping with rising graduate employability problems, youth underemployment, and total unemployment [4]. Though little has been written on this aspect in Cameroon, especially at secondary level, Atayo, [23] a Cameroon researcher examined the secondary school curricular relevance to job market needs in Cameroon. This author describes TVET as 'socially useful work skills' which also aims to develop critical awareness about their educational system and society.

In line with the importance of TVET, Atayo declares that: *'the acquisition of practical and applied skills as well as basic scientific knowledge is rudimental for the survival of any potential society. If one does away with all other types of education, a country can survive with TVET'* (P.47). This author concludes that the nomenclature of TVET has greatly shifted from simple skill set development to employability skill set development. Atayo's study falls in line with the present study since it establishes a positive link between TVET and graduate employability. It therefore follows that this author's focus was on the relevance of the secondary school curriculum in enhancing graduates' employability. The present study has also established a link between TVET and graduate employability, with curriculum relevance rather being considered as a sub construct, contrary to curriculum relevance being considered as the main construct in Atayo. In addition to this, Atayo based his study on general secondary education, contrary to this study which studied the case of technical high school students. However, both studies recommended a more job market friendly curriculum for secondary schools, so as to equip learners with the right skills for easy entry into the job market.

Moreover, Teneng (2018), in an unpublished thesis established the link between professionalization in higher education and graduate employability in Cameroon. This author examined curriculum relevance as a sub construct in enhancing graduate employability. Her results depicted a strong correlation between curriculum relevance and graduate employability in Cameroon universities. She

therefore recommended for a more job market friendly curriculum in the build-up of university programs. Teneng's work slightly dissociates from the present study on her case study which is higher education, and on the fact that she ventured on the professionalization of university classical programs. The present study ventured on technical and vocational programs of which research findings have earlier slated as job market oriented programs with immediate absorption impacts on graduates. It follows that the results demonstrated high need for a more fashioned curriculum with high job market ingredients rather than being more theoretically awesome. Thus, the present study seeks to resolve technical high school graduate employability gap, which is not the case studied by Teneng.

The link between TVET and graduate employability in this paper is also established by investigating the extent to which educational policy implementation (a sub variable of TVET) influences graduates' employability in the Diamaré division. The law on the orientation of education in Cameroon (April 1984) has been the main policy driver of education of the land amidst some interferences observed from global educational policy instruments such as the Education For All [24,25,26] the millennium development goals (2010), and education for sustainable development [27]. Draft Document of the Sector wide Approach/ Education. . Moreover, in 2009, the country adopted the GESP as the first ten years' strategic plan for the countries Growth and development as summarized below: *"This paper considers the challenges of growth, and the creation of employment opportunities as being at the center of its actions in favor of poverty reduction. The GESP, in accordance with Paris Declaration is the reference framework of government policy and actions as well as the point of convergence with development partners"* [22].

Though the GESP being the most recent education and training driver in Cameroon, it is not under any scrutiny in this study. However, we benefit nothing from hiding the fact that it is yet to prove it worth in boosting the Cameroon economy in general and graduate employability in particular. The focus of this study is rather on policy implementation, and not on policy orientation. This, for the simple reason that these policies may be very good, but implementation is poor. In this light, Nkamta [28] maintains that, even if the policy statements are rich in ideology, implementation and realization of fixed targets remains a myth in the Cameroon context. Nkamta's view falls in line with this study since he insisted on the implementation and realization of curriculum targets in enhancing graduate employability. However, he took this discourse further than the present study when he operationalized curriculum in terms of content, product, process, and praxis. So to say the present study fell short of this as it mostly insisted on decentralization in curriculum build-up, relevant content, and wide partnership in delivery. It therefore follows that both studies are resolving a pressing problem (that of curriculum relevance in enhancing graduate employability), whereas Nkamta at the same time is building a theory to better explain the stakes surrounding education and training curricula.

For TVET to succeed in building relevant labor market skills on youths and graduates, there is need for modern, technological and well adapted infrastructures. Infrastructures have an additional value in the skill development of the workforce, World Bank [29]. This argument is supported by Idialu [30], who maintains that for effective delivery of TVET, there is a need for adequate facilities in terms of building infrastructures and equipment to ensure quality training. To Mbangwana [31] infrastructural challenges constitute the most acute among others for TVET in Cameroon to hit the expected target of developing skills for work and life as well as enhancing economic growth for the country. To this, the author pointed out the insufficiency in building infrastructures, space, specialized workshops, and laboratories for practice during training. A Swiss architect, Le Corbusier as cited in Beynon, [32] terms school facilities as *'machines for learning'*.

Two main infrastructural facilities are considered in this study; buildings: comfortable classrooms well equipped and ventilated, and workshop /laboratories for frequent practice during training.

The position held by the authors above significantly aligns with this study as they pointed out the need for essential learning infrastructures. However, this study slightly dissociates from the above in terms of the specific types of infrastructures needed: workshop equipment (sufficient, updated computers for accounting students, and job market relevant software applications, sufficient, and modern sewing machines for dress making and designs...

Again, the extent to which TVET influences graduate employability is based on the partnership that exist between education and training institutions, and the world of work. To corroborate this view, UNESCO-UNEVOC [5] over the last ten years, in addressing the demise of unemployment, education, training and school-to-work transition, have recommended the combination of classroom learning and work-place. Since 2012, the ILO, while examining the way forward to tackle youth unemployment around the world, resolved to work closely with governments to improve the range of apprenticeship in the following ways:

- Combining more structured institutional based learning with workplace learning.
- Upgrading the skills of those overseeing apprenticeship including literacy training and livelihood skills.
- By encouraging and monitoring internship placement of learners and other work-experience schemes.

In a study on TVET in Nigerian secondary schools, Dagago [33] demonstrated that three key partnership elements such as enterprise partnership, internship and work placement, and industrial based learning can provide graduates with the right kind of skills, enabling them competitive and ready for the 21st century labor market. Also, Comyn as cited in Dagago (ibid) contends that classroom knowledge is simply pregnant with theory, and therefore cannot enhance the right skills set for today's world of work. He then concludes that practical-based learning requires specific participation and commitment of industries in related fields.

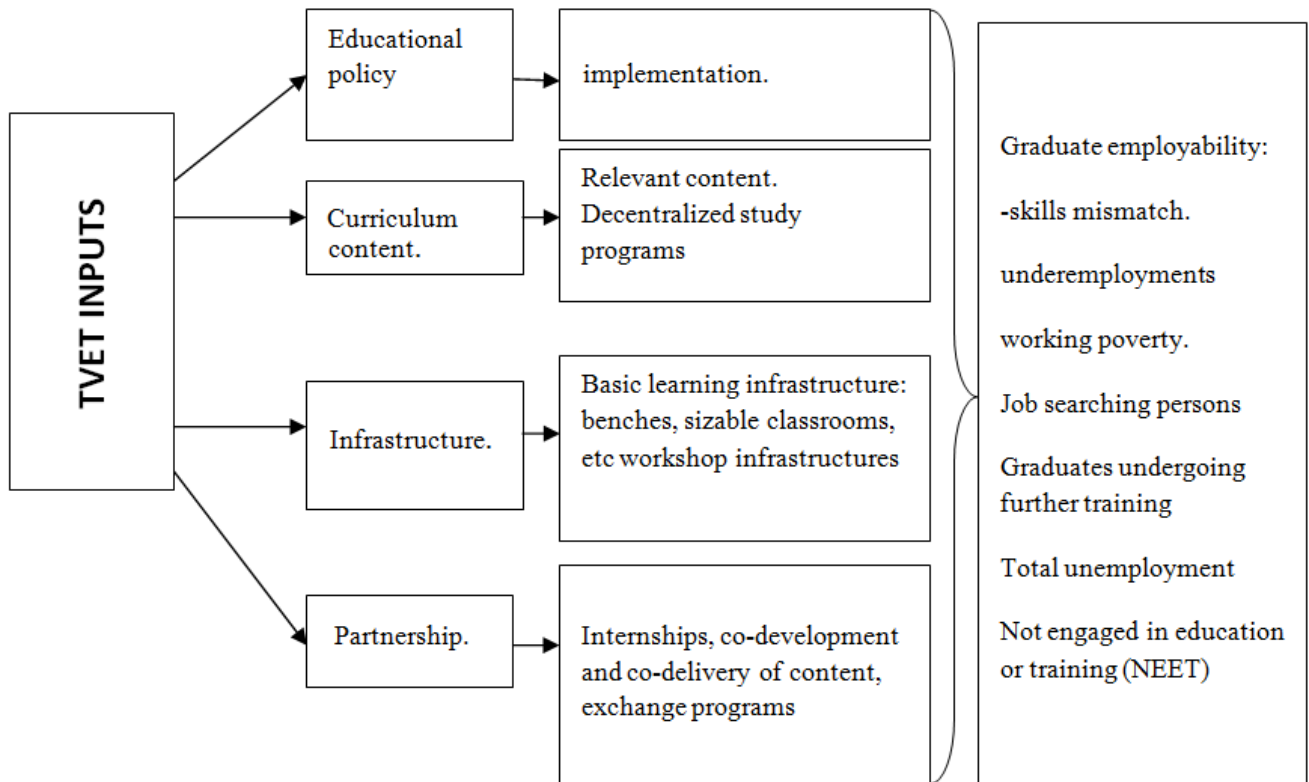


Figure 1. Conceptual framework explaining the link between TVET inputs and graduate employability in the Diamaré division (Source: Researchers)

In the present study, partnership is described in terms of interaction with relevant industries in the development of training programs, program delivery, internship programs and industrial based training. It follows that the views advanced by UNESCO, ILO, Dagago and Comyn are closely linked to this study as they established a strong correlation between TVET in terms of partnership and graduate employability. However, these authors omitted the aspect of co-development of study programs in their studies. Thus, the need for interaction between the school and the world of work in the development of programs becomes imperative in this study because most study programs in government technical schools in the Diamaré division do not match the realities of the job market [34]. Nkamta (ibid) supports this view as he posits that it seems very little or no consultations are done during programs conception for schools in Cameroon amidst each community having its own natural endowments, which should be reflected in the study programs in schools around them.

Looking at the literature above, it is evident that very little has been written on TVET and graduate employability in Cameroon. Most studies have focused on professionalization in higher education Njebakal & Teneng [35] except for few studies carried out by Nkamta [28], Mengan [36], UNESCO [37], ILO(ibid), and the world Bank(ibid). It is in this light that this study finds it uniqueness as the first to be carried out in the Diamaré and Cameroon. Another key issue is that people have not found it interesting to question the state of TVET offered in Cameroon since independence, whereas, this areas harbors problems beyond our simple imagination. Even if studies have been carried out to determine graduate employability problems, none have addressed TVET in terms of educational policy implementation, curriculum,

infrastructure, and partnership. The studies by Nkamta, Mengan, UNESCO, World Bank, have mostly focused on establishing the link between a specific variable and graduate employability, for instance: curriculum content and graduate employability, Infrastructure and graduate employability, educational policy and graduate employability.

3. Materials and Method

3.1. Research Design

It is a mixed study that enabled us to use both the survey and exploratory case study designs. The survey design was used to facilitate the handling of the huge number of graduates through questionnaires while the case study enabled a deep probe into the phenomena of TVET and employability worries through interviews with members of the world of work.

3.2. Population and Sample Size

The population of the study constituted technical high school graduates from GTHS Maroua and Salak undergoing training at the National Employment Fund (NEF), teachers from these schools, principals of these schools, and stakeholders of the job market. We went to NEF because it is a state owned agency running graduate employment training programs which help to integrate and link graduate job seekers with companies or employees. It follows that 81 graduates undergoing training at the NEF, and 47 teachers of GTHS were selected through stratified random sampling technique,

while 02 principals, and 02 members of the world of work were purposively sampled.

3.3. Research Instruments

The questionnaire was used to collect data from graduate and teachers, while a semi guided interview was used on principals and industrial stakeholders. To this, the questionnaire constituted 30 question constructed in respect of the likert scale response scheme: strongly agree(SA), agree(A), neutral(N), disagree(D), strongly disagree(SDA). These questions were based on the sub variables under TVET (Education policy implementation, curriculum, infrastructure, and partnership), and on graduate employability. Alternatively, the interview guide

constituted principal questions, with guided probes, strictly based on the variables of the study as mention above.

3.4. Technique for Data Analysis

The data collected was analyzed using both descriptive and inferential statistics. In facts, interviews were analyzed with the use of theme framework technique as described by [38], while quantitative data from questionnaires was analyzed with inferential statistics. The multiple regression analysis was used to test the prediction level of each variable on graduate employability. Theme codes were also calculated on 100% to determine the degree of prediction as well.

4. Results

Table 1. Distribution of responses according to TVET educational policy

Statement		SA	A	UN	DA	SDA
Need for educational policies response.	<i>f</i>	120	8	/	/	/
	%	93.7	6.3	/	/	/
need for effective Implementation t	<i>f</i>	110	9	7	2	/
	%	85.9	7.0	5.5	1.6	/
Need for policy adaptation	<i>f</i>	98	14	14	2	/
	%	76.6	10.9	10.9	1.6	/
Need for relevant reforms	<i>f</i>	86	11	31	/	/
	%	67.2	8.6	24.2	/	/
Need for supervision, monitoring, inspection, evaluation.	<i>f</i>	72	12	26	18	/
	%	56.3	9.4	20.3	14.1	/

Source: field statistics.

Table 2. Distribution of responses according to curriculum content

Statement		SA	A	UN	DA	SDA
There exist sufficient curriculum implication	<i>f</i>	90	11	20	4	3
	%	70.3	8.6	15.6	3.1	2.3
local job market Study programs.	<i>f</i>	80	11	17	10	10
	%	62.5	8.6	13.3	7.8	7.8
Relevant work related skills in the curriculum content.	<i>f</i>	80	13	24	11	/
	%	62.5	10.2	18.8	8.6	/
Curriculum delivery is largely theoretical.	<i>f</i>	78	14	16	6	14
	%	60.9	10.9	12.5	4.7	10.9
more extra-curricular activities to connect learners with the job market	<i>f</i>	102	26	/	/	/
	%	79.7	20.3	/	/	/
Relevant specialization	<i>f</i>	80	10	28	10	/
	%	62.5	7.8	21.9	7.8	/
internship and industrial sessions.	<i>f</i>	128	/	/	/	/
	%	100	/	/	/	/
More work industrial based training.	<i>f</i>	128	/	/	/	/
	%	100	/	/	/	/
Decentralisation of the curriculum.	<i>f</i>	108	/	20	/	/
	%	84.4	/	15.6	/	/

Source: field statistics.

Table 3. Distribution of responses according to basic and workshop infrastructure in Technical high schools

Statement		SA	A	UN	DA	SDA
need for sufficient and adequate Basic infrastructure.	<i>f</i>	95	33	/	/	/
	%	74.2	25.8	/	/	/
need for sufficient and workshop infrastructure.	<i>f</i>	128	/	/	/	/
	%	100	/	/	/	/
Use of obsolete equipment for practical,	<i>f</i>	101	/	27	/	/
	%	78.9	/	21.1	/	/
Awareness of the type of learning infrastructure required for the 21 st c economy.	<i>f</i>	78	15	35	6	14
	%	60.9	11.7	23.3	/	/
need for technological infrastructure.	<i>f</i>	128	/	/	/	/
	%	100	/	/	/	/

Source: field statistics.

Table 4. Distribution of responses on partnership between the school and industrial world, & government

Statement		SA	A	UN	DA	SDA
Requirement for partnership between school and industry.	<i>f</i>	84	44	/	/	/
	%	65.6	34.4	/	/	/
more internship in industries.	<i>f</i>	66	42	20	/	/
	%	51.6	38.2	15.6	/	/
Industries to communicate needs to technical schools and vice versa.	<i>f</i>	64	32	19	10	3
	%	50.0	25.0	14.8	7.8	2.3
exchange programs between schools and the world of work	<i>f</i>	101	20	7	/	/
	%	78.9	15.6	5.5	/	/
School and industry to organize seminars and career orientation programs.	<i>f</i>	66	37	25	/	/
	%	51.6	28.9	19.5	/	/
Industry, school, and government have to partner.	<i>f</i>	98	21	9	/	/
	%	76.6	16.4	7.0	/	/

Source: field statistics.

Table 5. Distribution of responses according to graduate employability

Statement		SA	A	UN	DA	SDA
soft or generic skills to enter the job market	<i>F</i>	105	23	/	/	/
	%	82.0	18	/	/	/
Need for specific and technical skills	<i>F</i>	128	/	/	/	/
	%	100	/	/	/	/
Need for entrepreneurial skills	<i>F</i>	100	8	20	/	/
	%	78.1	6.3	15.6	/	/
There exists a mismatch between the skills obtained during my training and those required by the job market.	<i>F</i>	95	18	15	/	/
	%	74.2	14.1	11.7	/	/
There is high incidence of underemployment and working poverty	<i>F</i>	112	14	2	/	/
	%	87.5	10.9	1.6	/	/
TVET graduates often go for further professional training before obtaining a first job.	<i>F</i>	103	/	12	13	/
	%	80.5	/	9.4	10.1	/

Source: field statistics.

4.1. Inferential Statistics: Verification of Research Hypotheses

Multiple Regression Analysis

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p.$$

1. β represents a set of coefficients in the sample population whose values are still to be determined.
 2. X represent the study variables.
 3. 0 represent a constant when the test is at Zero.
- Multiple regressions Analysis.**

Table 6. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,960 ^a	,921	,918	,88939

Predictors: (Constant), educational policy, curriculum content, infrastructure, partnership.

Table 7. ANOVAa

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1126,996	4	225,399	284,948	,000 ^b
	Residual	96,504	122	,791		
	Total	1223,500	127			

a. Predictors: (Constant), educational policy, curriculum content, infrastructure, partnership.

b. Dependent Variable: graduate employability of TVET.

Table 8. Coefficient Table

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	1,607	,438		3,670	,000
TVET Educational policy implementation.	,804	,138	,836	5,822	,000
Curriculum content.	,368	,071	,836	5,178	,000
Infrastructure: basic TVET learning and workshop infrastructures.	,411	,153	,268	2,687	,000
Partnerships between schools, industry.	,341	,111	,435	3,085	,003

a. Dependent Variable: graduate employability.

The regression model produces three tables (model summary, ANOVA, and the coefficient tables). Looking at the model summary, an important statistics R (0,960), indicates that 96.0% of variability on the dependent variable is predicted or explained by the independent variable. In other words, TVET inputs statistically predict graduate employability. This is confirmed by the ANOVA table as the fisher value $F= 284,948$ is greater than the degree of freedom: $df= 5,122(284,948 \geq 5,122)$. Looking at the coefficient table, we realize that all four predictors are statistically significant. This table reveals the fact that:

Educational policy implementation ($P= 0,000 \leq 0, 05$; $b= 0,804$). is significant at 0,05 alpha, and it is positive, showing that employability will be improved if these policies are well implemented.

Curriculum content ($P= 0,000 \leq 0, 05$, $b= 0.368$) is statistically significant at 0,05 alpha, and positive indicating that there is a significant link between the curriculum content and graduate employability. However, this value indicates that this situation can be improved upon if the curriculum content is strong and job market friendly.

On another note, statistics on infrastructure ($P= 0,000 \leq 0,05$, $b= 0.411$) reveals a statistically significant relation between the state of infrastructure in enhancing employability at 0,05 alpha. However, this value indicates that an improvement on the basic and workshop infrastructure will equally improve employability of graduates.

Statistics on partnership ($P= 0.003 \leq 0, 05$, $b=0.341$) is statistically significant predictor of graduate employability at 0,05 alpha. This value is positive, showing that an effective partnership between the school and the world of work will improve on graduate employability problems.

These results have simply confirmed the study, thus with an error margin of 0,05, we can conclude that the problem of graduate employability in the Diamaré division is statistically linked to TVET inputs.

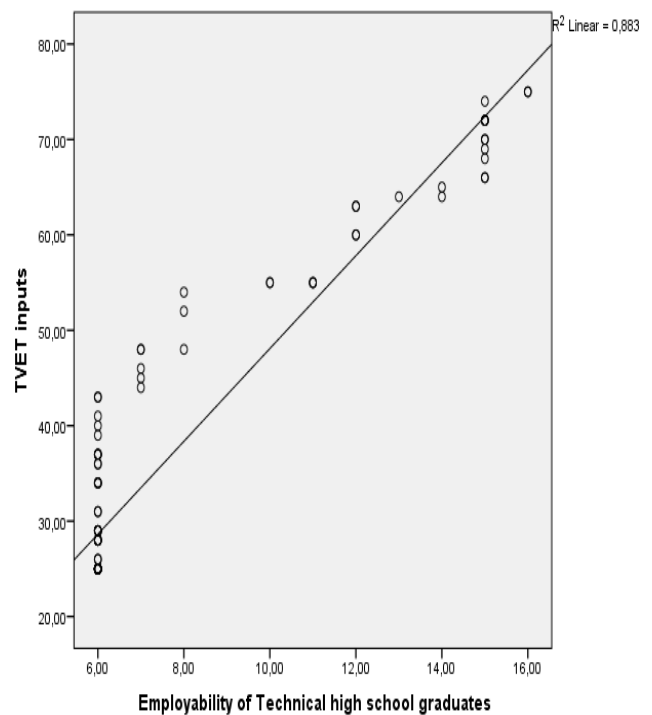


Figure 2. Scattered plot graph showing the degree of linearity between TVET inputs and Graduate employability

The scattered plot graph equally depicts high linearity of $R= 0,883$, this means that there is a strong link between TVET inputs and graduates employability in Government Technical high schools: Salak & Maroua.

5. Discussion of Findings

5.1. Findings Related to the First Research Objective

The first research objective sought to determine the extent to which educational policy implementation predicts graduate employability in the Diamaré division. Based on the regression test, the corresponding hypothesis was confirmed with a statistical significance level of $P= 0,000 \leq 0, 05$, $b=0,804$, indicating that the way policy is being implemented in GTHS Maroua and Salak, highly predicts graduate employability. In the same light, information collected through interviews was treated through the theme framework analysis. The results showed that 95% of respondents interviewed corroborated with the fact that the implementation of TVET Educational policies in the education and training of GTHS learners is poor, and thus falls short of qualifying them for a quality job when they leave school. This therefore confirms research hypothesis n°1.

The graduates questioned at NEF expressed awareness of good Educational related policies such as the GESP, NYSAP, to name this few, but pointed out much laxity in the implementation of these policies. This was same for industrial stakeholders who declared that: *“These policy strategies have very promising orientations in uplifting the Cameroon youths and graduates to higher heights, but no major change has been registered since their inception in the country’s education system. To talk of Technical High Schools, what we know is the fact that there exists laissez-faire in implementing policies. There is the need for serious supervision, inspection, control and feedback. We are very happy when we encounter researchers working on such a topic. if we move around Maroua town, you will discover that most young boys selling in the streets are Technical High School Graduates”* (Field statistics collected by the researcher, June 2018). This fall in line with the assertion made by Nkamta(ibid) that Cameroon is very good in policy definitions, but poor in realizing them.

On another note, some respondents rather insisted on the fact that the definitions of some study programs do not match the demographic characteristics of the environment. It therefore follows that the main economics activities of the region which turns around cereal agriculture, cattle rearing, craft and tourism, are least represented in the study programs in these schools. In this light, a school principal declared that: *“our duty is to educate and train learners according to the policies handed to us by the ministry of Secondary education. If you ask me to say something on the adaptation of educational policies, I will simply tell you that they do not match with the realities on the ground. When you take a look at the realities of Maroua, it is clear that we need more skills in agriculture, animal raring, and artisanal. But these policies do not consider all these aspects”* (field statistics collected by researcher, January, 2018). To this, Ajayi as cited in [35,39] explains that TVET would least resolve the problem of graduate employability unless the policy input is revitalized in terms of orientation, adaptation and implementation. Field observation revealed the absent of policy monitoring, evaluation and feedback mechanisms.

5.2. Findings Related to the Second Research Objective

The second research objective aimed at measuring the level at which graduate employability in the Diamaré is related to curriculum content in these technical high schools. The regression test demonstrated a high statistical significance between curriculum content and graduate employability ($P= 0,000 \leq 0, 05$, $b= 0.368$). Also, 90% of those interviewed affirmed that the curriculum content is responsible for graduate employability problem observed on these graduate. Most graduates questioned at NEF justified their presence here on the fact that the education and training received at technical high school was irrelevant, and lagging in terms of practice, and internships. In this light, the ILO [9], asserts that the school curriculum in developing countries is skewed towards academic preparation as evident in widespread unemployed youths. It follows that learners spend more than 80% of the education and training in the classrooms, the principals confirmed that learners only go for industrial visits which lasts for few hours, and this is done twice a year only. When we consider such an affirmation one is tempted to ask where we are heading to with such curriculum model which is largely theoretical than practice.

Another side of the debate questions the stakes surrounding curriculum development. The primary question is: are sufficient consultations carried out before conceiving study programs for a particular locality, as mention earlier, the study programs do not match the realities of the job market of the region. To this, a principal in one of these technical schools questioned the *raison d’être* of a course on petroleum mining in the curriculum of technical high schools in the Diamaré, where the skills required by the job market range from agriculture to craft. This means that the curriculum is being conceived without the consent of local realities, hence simply on high level policy roundtables. In this light, an industrial stakeholder declared as follows: *“we have never been consulted in the development of the study programs in Technical high schools. It is really a sad situation because we understand best the key aspects to be included in the curriculum, which can prepare these young learners to obtain good jobs. We are the agents on the ground and understand what we are talking about”* (Field interview statistics, May, 2018).

In this vein the human capital theory is often recommended as a guide to policy makers and trainers on the fact that any investment in education and training should target the development of essential or quality skills which will bring about significant returns in terms of productivity, revenue and hence economic growth Psacharopoulos [40]. This discourse affirms the fact that graduate employability problem statistically depends on the curriculum content as a TVET input.

5.3. Findings Related to the Third Research Objective

The third objective sought to examine the extent to which basic and workshop infrastructures determine

graduates' employability in the Diamaré. To this, the regression test revealed a high level of statistical significance ($P= 0,000 \leq 0, 05$, $b= 0.411$) between infrastructure and graduate employability. Also, 95% of those interviewed confirmed a strong link between infrastructure and graduate employability. In this connection the World Bank [29] declared that infrastructure remains crucial, and has an additional value in the development of skills for the workforce. Moreover, Mbangwana [31] pointed earlier that the main challenges faced by TVET in Cameroon is the insufficiency of basic learning infrastructure (non ventilated classrooms, limited space, limited benches, overcrowded classroom, ...) and workshop infrastructures (well-equipped auto garages, sufficiently equipped carpentry workshops, availability of modern computer laboratories and an active internet service for commercial learners, ...).

To this, the principals invited us during field studies to take a look at the school infrastructures as he exclaimed in these words: *"you can take a look for yourself around the school campus; only four computer desktops are available for over two hundred students offering accounting, few sawing machines. Even the classrooms are not conducive for learning, an exposed school campus, and no workshop at all. it is really a difficult situation to explain. I do not believe anybody lacks understanding of the fact that the world of today is very challenging and complex. Therefore, we must educate and training with modern, and well adapted infrastructure. We really lack the means to afford for quality training infrastructures, for they are extremely expensive"*. (Field interview statistics, May 2018).

Revelation made by the schools' heads, the teachers, and based on our personal observations of the state of infrastructure in these schools almost left us speechless, but not without emphasizing the fact that it is an alarming situation which need urgent attention, if not, we are simply destroying the future of these youths.

5.4. Findings Related to the Fourth Research Objective

The fourth research objective had as aim to determine the extent to which partnership explains graduate employability in the Diamaré division. The results ($P= 0.003 \leq 0, 05$, $b=0.341$) showed that partnership is a statistical significant predictor of graduate employability. This means that there is need for a more objective and engaged partnership between school and industry so as to provide the chance for more serious and targeted internships, since it constitutes the base of enhancing employability skills on learners. In this direction, the ILO [7] explains that government should encourage the combination between classroom and apprenticeship learning in order to deal with the problem of graduate employability. The various axes of partnership evoked by some respondents convoke partnerships from the level of curriculum development to delivery. To this, industrial stakeholders think that they should partake in program conceptions of these schools since they master best the skills required in the industries. Moreover, they expected another partnership in the delivery of courses. So to say, they declared that *"The type of partnership that can really be of help to technical high school graduates should be at*

the level of curriculum development, and delivery. Some career orientation sessions, are often organized by the NEF. But i believe exchange program will really be of help to graduates. I think there are programs that should even be handled by experts from industries". (Field interview statistics, May 2018).

Again, industrial stakeholders, when interviewed confirmed the fact that technical high school learners have never spend a considerable period for internship in the industries. This corroborates the declaration made by some principals that the official timetable allows them to send high school learners only for industrial visits. In fact, the training timetable at the high school indicates that for the three years of high school training, learners make two (02) visits to industries for the first year, four (04) visits for the second year, as well as four (04) for the third year (Minesec.gov.cm). Whereas, learners are required to have sound machine knowledge so as to be able to operate them upon graduation if stumbled on a vacancy, what classroom theory will never transmit.

In Cameroon, the government is the main financier of Government technical schools. She therefore is responsible for the total control of all inputs in the training of young graduates. In this light, she is equally charged with establishing the best partnership between schools and the world of work, so as to equip learners with the right skills. To this, the individuals interviewed declared that *"For the right kind of partnerships to exist between the school and the world of work, the government is better placed to encourage and nurture it. The government has to make it a win-win partnership, because industries will hardly accept to enter into unfruitful partnership"*. (Field interview statistics, April, 2018).

It is in this vein that Etzkiwotz & Leyesdorff, [41]. asserts that the best partnership which can better develop the right skills on learners fall within the Triple Helix III Model. The Triple Helix model advocates for an equilateral interaction between Government, Academia, and industry. Here, planning, policy and decision making, curriculum building, and delivery, is an equal responsibility of the three actors. In the case of this study, the government represents the state, academia represents Technical high schools in the Diamaré, while industry represents the world of work. An equitable interaction between them from policy, planning, curriculum development and delivery, and financing for adequate infrastructures will equip learners with the right skills for the 21st Century job market.

6. Suggestions

Based on the above findings, the following suggestions were made to the educational community involved in enhancing graduate employability:

Government should redefine policy orientations to reflect the demographic conditions of the local population. This means bring policy to context. In simple terms, the policy orientations for education and training in Diamaré should be unique, for example. Adapt TVET educational policies to the immediate realities of the local population. In this vein, agriculture, tourism, craft and artisanal, should occupy important positions in the training policies.

The government should put in place a need analysis team, made up of qualified educational planners, charged with the job of carrying out a need analysis of all stakeholders in higher education periodically in order to give feedback to policy makers and curriculum designers. This will solve the problem of misplaced priorities in curriculum development. The educational planning team should work closely with curriculum designers after carrying out a deep diagnosis by concerting with the local population and officials should advise the minister of secondary education and staff, curriculum designers, inspectors and principals on the appropriate approaches of implementing a particular content or program, and the required basic and workshop infrastructure

The government should also consider investing more in terms of finances in TVET because this type of education has been identified as a proxy for the fight against youth and graduate unemployment. However, the acquisition of modern infrastructures for quality training of these learners entails huge financial investments. We think that, TVET should be considered a top priority in secondary education.

The government through the ministry of secondary education should reinforce the implementation of educational policies through her network of pedagogic supervision, ensuring that policy guides are well put in place, and also oblige frequent periodic reports of the state education and training.

Recruit curriculum experts who understand what it takes to conceive a relevant curriculum. In this light, the curriculum model presented by Nkamta (ibid) should be the watch word: *Curriculum as a praxis*. This model advocates for the curriculum to have a direct relationship with the development of skills for life and society.

Curriculum development should be bottom-top and not top-bottom.

Curriculum should be more practical oriented with more time for practice than theory.

The Triple Helix III model should be adopted in the revitalization of TVET towards graduate employability enhancement.

A systematic voluntary service should be established between school and the job market, which immediately absorbs graduates, so as to familiarize them with the world of work, and to provide them with work experience as often demanded by employees as key intake criterion.

7. Conclusion

This paper set out to investigate the extent to which TVET inputs influence graduate employability in the Diamaré Division. Employability was understood in this study in terms of relevant skill development: generic skills, specific/technical skills, and entrepreneurial skills by Government Technical High schools, to ease learners' entry into the job market upon graduation. Therefore, employability is being considered a problem when graduates are unable to integrate the job market, some are trapped in illegal hawking in urban markets, others parade the quarters with scroll drivers, trowels, hammers, and related tools, with readiness to offer repair services, just to afford bread. More so, some still register with NEF, and

other professional training institutions to upgrade their skills. On the other side of the coin, TVET inputs were seen in terms of policy implementation, curriculum, infrastructure, and partnership in the education and training of technical high school learners in the Diamaré. This means that the problem of graduate employability should be resolved if TVET inputs are well handled or revitalized.

Therefore, an important aspect to note in this paper is that equipping these government technical schools with sufficient, and 21st century adapted policy implementation measures, relevant curriculum, infrastructures, as well as the right partnership will enable them inculcate the right skills to permit learners integrate the job market with ease. Thus, if Cameroon intends to cope with the problem of graduate unemployment as observed in the Diamaré, she should revitalize TVET inputs to dance to the rhythm of the new knowledge based economy and a permanently evolving labor market. Looking at the literature provided above, we have come to realized that the concept of employability covers a broad field which requires training institutions to carefully consider inputs for skill development. In this study, policy makers, curriculum developers, educational managers, administrators and curriculum delivery experts are expected to revitalize and re-orient their actions through TVET, so as to obtain graduates with the right employable skills for today's job market.

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