

Technical Workshops in English Speaking Technical Secondary Schools and the Impact on Students' Academic Performance in Public Examinations

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ABSTRACT

This study focuses on technical workshops and teacher quality in English speaking technical secondary schools and the impact on students' academic performance in public examinations. A descriptive survey research design was used in conducting the study. Data were collected from 1017 participants. 739 of them were students in the examination classes, 260 were teachers, 18 pedagogic inspectors. Data were collected from 11 technical secondary schools. These schools were from the South West and the North West regions and were functional schools due to the socio-economic crisis affecting these regions. Data were collected using questionnaire and interview guide. Test items on the questionnaire were designed using the four point Likert scale. The reliability analysis of the different sets of questionnaires was above 0.05 level of significance. Data was analysed using **SPSS standard version 21.0**. Students were the most satisfied (68.4%), followed by pedagogic inspectors (64.1%) and lastly teachers (50.9). Based on the Chi Square test, the P-value (0.207) is greater than 0.05 hence indicating that the three stakeholders had the same level of expectations. Students were the most satisfied with workshops and practical's (42.6%), followed by teachers (31.1%) and then pedagogic inspectors (30.0%). Based on the chi square test, the P-value (0.338) is greater than 0.05 hence indicating that there was no significant difference in perception among the three stakeholders. In the others sense, all the three stakeholders were highly dissatisfied with workshops and practical's. Students the most expected improvement of workshops and practical's as to optimally enhancing performance in public examinations (83.0%), followed by pedagogic inspectors (61.1%) and then teachers (55.0%). Based on these results, recommendations were made following the specific objectives. The curriculum of technical education should be adapted to the needs of our society, the government should equip technical workshops in schools and create more training institutions and equip them with training facilities and also promote continuous professional development so to improve students' academic performance in public examinations.

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INTRODUCTION

Education constitutes a vital tool for national growth and development. In Cameroon like in many other countries the education sector represents one of the government's priority areas of development. This is reflected in Part I, Section 2 of Law No. 98/004 of 14 April 1998 to lay down guidelines for education in Cameroon. Part II, Section 2, of this law stipulates that the state shall "ensure the constant adaptation of the educational system to national and socio-cultural realities, and also to international environment, especially through the promotion of bilingualism and teaching of national language". Technical education development in Anglophone Cameroon where this kind of education is now being embraced as a vital component of the education system can be seen as reflective of government's agenda to adapt education to local or contextual realities since it focuses on the teaching of basic skills such as carpentry, woodwork, building and construction, automation, cookery, upholstery, motor mechanics, electrical technology, welding, industry chemistry, wood processing, sanitary installation, clothing industry etc. that are relevant

in the local contexts and in the day-to-day lives of the population. Like the other forms of education, technical education in Cameroon is expected to contribute its fair share towards the economic, socio-political and technological emergence of country by 2035 as stipulated in the "Vision 2035" (Republic of Cameroon, 2009).

However, despite the importance of technical education as a catalyst for skill distribution and though expected to play a fundamental role in national growth and development, in Cameroon and in Sub-Saharan Africa in general, technical education faces many challenges that impede its smooth operations and the teaching/learning process. This sector of education has, over the years, received very little attention with regard to its development in the country, especially in the Anglophone regions, compared to general secondary education. This relative neglect is perhaps the backdrop of the many challenges that characterize technical education in Cameroon today, including the problems of inadequate human, financial and material resources, poor

infrastructures, and inefficient management of resources as evident in the high of student failure, repetition and dropout, among others.

According to UN (2015), though access to schooling has improved rapidly throughout the developing world since 1990, learning outcomes has lagged behind. This study focuses on the challenges that characterize technical secondary education in the Anglophone Regions of Cameroon and the impact on students' academic performance in public examinations. Aim is to shed light on the problems of technical education and the effects which these have on students' learning so as to provide guide on the areas where additional resources should be channelled towards improvement in the sector. This work is organized in five chapters: Chapter one is the introduction, which comprises the background to the study, statement of the problem, objectives, research questions, hypotheses, justification of the study, significance of the study and scope\delimitation of the study. Chapter two focuses on the review of related literature that high lights the conceptual literature, theoretical and empirical literature of the study, Chapter three treats the method. This chapter advances reasons why the procedure used for the investigation. Chapter four focuses on data analysis and the Chi-Square test was used to analyze data collected. Chapter five which is the final chapter of the study provides conclusions, suggestions and recommendations and contributions to knowledge.

BACKGROUND

Before the arrival of colonial masters in Cameroon, Cameroon practiced her own type of education known as indigenous education. This type of education was non - formal and general towards the preparation of a child for succession to ensure the continuity of the society. In this type of education, there was no laid down principle or written laws guiding its functioning. According to Mac Ojong (2008), the education of the Cameroon child began from birth with the mother being the sole teacher up to about the age of 5 or 6. This was so because the child at this age is more attached to the mother. As the child, grow older, the education of child is handled by both parents. Each parent was responsible of preparing the children to take over when they are old. The boy child was trained by the father to be capable of taking care of his future family. For these reasons, the father impact the skills in the domain of farming, fishing, hunting, weaving of basket, thatches and others that will enable him live like a man.

On the other hand, girls were trained by their mothers to take care of the home and family, to cook, do laundry, fishing and some other trade.

According to Mac Ojong (2008), the "curriculum from the physical, economic, social and cultural environments, the norms, values, customs, belief and religion of the Cameroon indigenes. So subjects like physical education, history, geography, literature, music, language and mathematics and above all vocational training like weaving, pottery, beads making etc.

It is a serious over oversight and probably ignorance for anyone to believe that in Cameroon, there was no education before the arrival of colonial masters in Cameroon. The vocational training was handed down from one generation to

another. Indeed, during the pre-colonial period, educational policies were shaped by the cultural and economic needs of the various communities. The trades that were learned were gender - oriented. They were trades and crafts meant for boys and those for girls, here, how, the teaching method was through observation, imitation and participation as learning progresses.

As the child grows older in the community, the teachers are not only parents, other personalities come into play. They include the members of the family, friends, chiefs and elders of the community. As concerns, vocational education, the master craft man might definitely be a relation but he automatically becomes the teacher.

During this era, there was no concrete evaluation to award certification or examination by the master. Craft man was able to test the learner if he has acquired the required skills when he can produce the same items that he was taught to do. This indigenous education was interrupted with the coming colonial masters. But it was not completely destroyed.

The London Baptist Missionary Society (LBMS) laid the foundation of Western Education. They arrived Cameroon in 1840. Joseph Merrick and Alfred Saker ushered in Western education in order to compliment the indigenous education given at home. They opened the first schools in Bimbia and Douala where the indigenous people were taught to read and write. Emphasis was laid on Elementary Education based on the 3Rs: Reading, Writing and Arithmetic. (Fonkeng, 2010).

According to Mac Ojong (2008), Education was considered as an indispensable medium for the Baptist to achieve their aim of evangelization. This instruction clearly gave first place to it with school as a necessary and important adjunct. Between 1844 and 1880, the LBMS created about 18 schools in Cameroon.

During this period, Rev. Alfred Saker also introduced Vocational Education where young indigenous Cameroonians were introduced to new technology of brick making, carpentry and tailoring amongst others. Hence, the foundation of formal vocational education in Cameroon was laid by the London Baptist Missionary Society. The Baptist reign in Cameroon came to an end when on July 12th 1884, Cameroon was annexed by the Germans following the signing of the Germano-Duala Treaty.

Technical Workshops

Practical experiments in all the specialties in technical and vocational education takes place in the technical workshops. These technical workshops are usually the best grounds for the technical secondary students to get first hand-on experience on the machines found there.

Ezeji (2005), a workshop is a unique learning situation in which learners may experiment, test, construct, assemble, disassemble, repair, design, create, imagine and continue learning. These workshops may vary from one trade to another and vary too in size and complexity. Technical workshops are very important didactic material for technical education. According to Draft Document of the Sector Wide Approach/Education (2005), most technical and vocational schools have too many students in the classroom given an

average of teacher/student ratio of 1: 60 which does not match the quantity of available equipment in the different trades in the technical workshops. This is a serious setback for the students to put in the required time on the practical activity. Some technical might pass several weeks without touching a machine. In some schools, the teacher might reduce the time so as to enable each student a turn to do so.

Didactics is intended for instruction, instructive-inclined to teach or lecture others. The didactic of literature or other art intended to convey instruction and information. The word is often used to refer to texts that are overburdened with instructive or factual matter to the exclusion of graceful and pleasing details so that they are pompously dull and erudite.

These didactic or instructional materials are greatly recommended in schools for teaching of technical subjects. The government of Cameroon encourages the use of these didactic materials. That is why the government through the MINESEC publishes the list of required textbooks to teach technical subjects. The most important didactic materials for technical schools are the workshops for practical. The didactic materials are there to help the teachers of technical education. Even though, the government on her part is encouraging the use of didactic materials in our schools, it is still a big challenge because of the economic situation. Most parents find it difficult to provide these required didactic materials like textbooks, workbooks for their children especially those of technical schools because of low incomes and non-availability of the textbooks. This problem makes it difficult for them to do their assignments effectively. This deficiency makes pose as a challenge for technical education and vocational training in Anglophone Cameroon and might affect academic performance.

Socially, the use of didactic materials should be highly encouraged in our schools especially in technical education because these didactic materials as described by Nzeka (1981) "children learn best when they take an active part in the learning process."

The Availability of Technical Workshops for Technical Education and Vocational Training in Anglophone Cameroon

According to Umar (2010), a workshop refers to an infrastructural facility containing tools, equipment, utilities and space for conducting technological and instructional activities. According to him, in order to train students effectively, they must carry out practicals which is part of their learning, these must take part in technical workshops. The National Workshop Association (1997) holds that a workshop is a flexible environment ,in which coaching different kind of activities, works and learning takes place .According to them, workshop supports participants' personal growth, social employment, active participation ,employability and work skills through communal coaching with an emphasis on practical work.

Ezeji (2005), a workshop is a unique learning situation in which learners may experiment, test, construct, assemble, disassemble, repair, design, create, imagine and continue learning. These technical workshops may vary from one trade to another and vary too in size and complexity.

These workshops are well designed to meet the need of particular trades. For instance, the dress making workshop

is different from that of wood work and electrical refrigeration .The workshops in technical schools in the English-Speaking sector need the standard deserve to ensure effective practicals which is part of their examinations .To make technical workshops more effective, it must be managed well .Okoro (1999), advanced techniques for effective activities in the technical workshops. He advised teachers of technical education should put in place workshop timetables to guide the learning activities of the technical skills. The teacher organizes workshop activities from simple aspects to more complex ones. the technical education must allow the students the opportunity to explore their own experience. They must equal opportunity to be fully involved in practical exercises.

Adebayo (2001), advised that technical workshops tools and equipment that are in good working conditions before practicals. According to him, this will avoid breakdown during practical lessons. In our technical secondary schools and the vocational training centres in Anglophone Cameroon (English-Speaking Cameroon), technical workshops are not always adequate and outdated as indicated by end of reports of technical school administrators of the technical schools and vocational centers in two regions. However, some exceptions are seen in GTHS Kumba, GTHS Ombe, GTHS Bamenda GTHS Molyko Buea and the Vocational training center in Limbe. Those found in suburban cannot boost of technical workshops.

Adabay (2010), also insist that the teacher of technical education must assemble machines before the students can use them so to avoid accidents in the technical workshops.

Nwachukwu (2001), advices teacher of technical education should always carry pre-test himself or herself to confirm the necessary procedures before engaging the technical students' practical. This is necessary to know the time needed for practical. Elom (2009), puts forward some ways for proper arrangement for a successful technical workshop practice. He puts the following the steps to be respected in technical workshops in technical secondary which the teachers' role and that of the students should well defined so to avoid conflict of interest, ensure that there is active presence of supportive personnel who are present to assist the students of technical schools . These supportive personnel also help in setting up the workshops before practical lesson begins. This involves taking out the require tools and equipment for practical. For instance, a practical lesson in home economics, the supportive take out scale, baking pans, flour sugar, eggs, raising agent etc. for baking cakes. The teacher must out the various procedures systematically to ease understanding. All these guidelines is to help students of technical schools understand the lessons. The workshops should spacious to ease circulation and provided with safety outlets.

The development of technical education requires a huge amount of Investment in infrastructure on the workshops where practical take place. The Ministry of Secondary Education secures a huge percentage (%) of the country budget on Education. According to the report from the Cameroon National Forum on Education Report, ninety four percent (94%) of the budget of Education goes to the expenditure on personnel while only three percent (3%) is used for the maintenance, replacement of school furniture

purchase of teaching aids, books and professional development of personnel. From the above analysis, we realised that technical education which depends mostly on the workshop for the practical development of skills suffers a lot because the machines in the workshops are costly and requires much capital for maintenance.

Adesina (1988) buttress the aspect of Capital for financing education by adding that “A well-financed educational system may not necessarily perform wonders, but a financially starved education system can hardly produce the desired results”

This difficulty hinders a lot of development in technical education in Cameroon in general and in the North West and South West Regions in particular. In December 2003, then Minister of Secondary Education revealed the financial difficulty involved in constructing and equipping a technical workshop in a technical secondary school. He said it will cost between fifty millions and one hundred millions. He said Budgetary Allocation was two hundred and eight (208billions) for 2014 where 192billions was envisaged for current expenditure (Lyonga, 2016).

Table 1: State of Technical Workshops Facilities in 2008 in Selected Schools in Anglophone Cameroon

School	State of Workshop				Facilities		Observation
	Workshop building		Equipment		Workshop material		
G.T.H.S Bamenda	Available	Needed	Machines	Specific teaching tools	Industrial Department	Commercial Department	
	12	adequate	Fairly adequate	Fairly adequate	adequate	Adequate	Need for more
G.T.H.S Buea	3	5	Inadequate	Grossly inadequate	adequate	Adequate	Need to construct workshop and equipped them
G.T.H.S Fundong	2	5	Inadequate	inadequate	adequate	Fairly adequate	Need heavy equipments for workshop
G.T.H.S Kumba	12	adequate	Fairly adequate	adequate	adequate	Adequate	Equipment with obsolete equipments some never have been used. Need repairs and replacement
G.T.H.S Ombe	8	4	Old and obsolete	Adequate	Fairly adequate	Fairly adequate	Need new machines workshops and training materials

Source: Service of Materials, Infrastructure, Equipment and Maintenance MINESEC (North West and South West Regions of Cameroon)

See appendix VIII on page 269 (The state of Infrastructure)

Table 2: The situation of Technical Workshops in Technical Colleges in Meme Division in the South West Region of Cameroon

Schools	Workshops
GTHS Kumba	Adequate
GTHS Kang-Barombi	Adequate
GTHS Bombe-Bakundu	Inadequate
GTC Teke	Inexistence
GTC Pete Bakundu	Inexistence
GTC Matoh Butu	Inexistence
GTC Matondou	Inexistence
GTC Bai Foe	Inexistence
GTC Nake Bakoko	Inexistence
GTC Massaka	Inexistence
GTC Kokobuma	Inexistence
GTC Njanjo Titi	Inexistence
GTC Mofako-Bekondo	Inexistence
GTC Mbonge	Inexistence
GTC Kake 1	Inexistence
GTC Dipenda Bakundu	Inexistence

Source: Infrastructure Department of the Regional Delegation of South West

Table 3: Structure to Show the Available Workshops in Technical Colleges in Fako Division.

SCHOOLS	WORKSHOPS
GTHS Molyko Buea	Adequate
GTHS Limbe	Adequate
GTHS Ombe	Adequate
GTHS Tiko	Adequate
GTHS Muyuka	Adequate
GTC Bakingili	Inexistence
GTC Bova	Inexistence
GTC Ekona	Inexistence
GTC Lysoka	Inexistence
GTC Munyenge	Inexistence

Source: Infrastructure Department of the Regional Delegation of Secondary Education, South West Region.

World Bank Report on Education in Sub-Saharan Africa (1988) indicates the policies for adjustments by the World Bank and IMF; revitalization and expansion grossly blamed the low rate of development of technical skills in general (and technical education in particular) is the lack of instructional materials which has a big role to play in the development of technical education but it is absent.

Fonkeng (2010) supports the aspect in Cameroon education when he attests that Structural Adjustment Programme (SAP) on Cameroon contributed to the drop of finances on education in general Cameroon as a whole. The economic crisis and measures like SAP introduced by the World Bank greatly affected TVET which needed huge funding for its development which remains a big challenge. The inadequacy or at times absence of these technical workshops tends to slow down the development of technical education.

The teacher's ability to transfer knowledge and skills in the workshops is also very influential in technical education and vocational training. If teacher's ability in the technical workshop is appreciable, by the student, this can contribute positively to the student's perception of technical education in the North West and South West Regions and their subsequent performance. This is because the practical in technical education examinations like CAP, Probatoire, BACC play a significant role.

Haribison and Hanuskek (1992) holds that the low salaries paid to teachers affect the output in the technical workshops, which also goes a long way may affect students' academic performance in public examinations Differences between principal/chiefs of works over finances to buy materials for workshop and practical pose a serious problem to technical education. The Head of Department of each trade is the one to officially give the chief of works their departmental needs as concerns their particular trade practical. The chief of works takes their demands to the principal to authorize the bursar to give finances. But most principals want to buy the materials for practical themselves, hence leading to conflict. Other problems of technical education in Africa and Cameroon in particular ratio of technical workshop and students in classroom, other weakness of workshops, lack constant electricity, outdated machines, mismatch option, the quality of the teachers, lack of space in the workshops. According to A Handbook for teachers of Secondary and High Schools of the Ministry of Secondary Education, 4.7.1.1, relation with the outside world, it is extremely necessary to create and sustained and effective relationship with various bodies on the kinds of options taught in schools. (These links

could be with: company managers, trade unions, various administrative set ups, the Chamber of Commerce and Industry, Chamber of Agriculture etc). Such links once established, will enable students on practice sessions in the organization concerned. Members of the various professional bodies can sit in school inner council as observers and consultants.

Training in some recognized workshops around where technical schools are located were accepted to solve the problem of technical workshops to some extent. Efficiency of the trainers in these technical workshops are not well educated themselves. Some students became truants between their schools and the recognized workshops.

Student/teacher ratio: The number of students for a single teacher to control at a particular time is very important in the development of skills (basis of technical education). The individual attention of the teacher vis a vis the student is very important learning determinant as the number of students who share the teacher's attention in the workshop, individualized attention from the teacher reduces. This is very common with our crowded classes in Cameroon which does not respect the international standard of 25 students per class.

With the numerous government policies in place we can see the sprout of technical colleges at least in every Divisional Head quarter in the North West and South West Regions of Cameroon. The quantitative distribution of technical colleges to provide technical education is marred with serious handicap which is the availability of technical workshops. For technical education to become self-sustaining, students need to develop technical skills which should be acquired through the provision and use of proper instructional facilities in their workshops (Harbison and Hanushek, 1992). Efforts should not only be based on opening technical colleges in all the nuke and corners of the North and South West regions of Cameroon but also match them with these precious didactic instructional materials which are technical workshops where the practical exercise of technical education takes place.

Importance of Workshops to Technical Education

Workshops are very important to technical education but this suffers a great challenge. The National Forum on Education Document reveals that the greatest challenge of Technical Education in Cameroon is at the level of inadequate workshops where practical of technical education can take place. These workshops are either absent,

unequipped or outdated for the acquisition of technical skills Lane (1987) holds that in today's increasing world, many jobs require the acquisition of a variety simple and complex skills. This workshops are very important in technical schools because the practical part do take place in the workshops and the students can develop their capability to perform complex "real work task". Ackerman and Kyllonen (1991) stipulates that training could be aimed to raise the level of performance by revealing which abilities influence learning and other possible moderating variables.

The development of technical skills requires practice. Practice is measured in terms of speed precision, distance procedures or techniques in execution. This attribute of practice is supported by Lugujo and Mayindo (1993) who hold that a fully proficient technician and trade men from technical colleges ought to know how to handle a range of new types of equipment and understand the properties of new materials. According to Sergiovanni (1995), students learn best by doing, and doing is best when it is lifelike; when it involves engagement with real or near real problem solving in the technical workshops. All these must take place must take place in the technical workshop. The million-dollar question therefore is that are these workshops available as didactic materials in the technical schools found in the North West and South west regions of Cameroon? Are these workshops equipped? In most African countries in general and Cameroon in particular, technical secondary schools do not have adequate workshops either in number or other qualities that make them up like electricity supply, water supply and machines. In Cameroon the government has made available huge sums for educational investment in TVET but the amount is still inadequate because technical workshops are very expensive to manage. According to World Bank Report 2017, the equipment for technological options such as automobile, welding and electronics are not readily available because of their cost. An average technical college needs the following technical workshops:

1. Home economics laboratory
2. Electrical workshop
3. Plumbing installations
4. Dress making workshop
5. Building and construction workshop
6. Wood work and carpentry workshops amongst others.

These workshops are needed because practical experiments take place there. Technical education strives more on practice and hands on experience. The experience remains and learner is excited to develop more skills and even bring out some other abilities in him to create new designs and to improve on the existing ones. This enables the learner to carry out some constructive exercises hence the learning theory of constructivism. The reality on the ground in technical schools in the North West and South West is very different. The number of equipment in the workshops is limited thereby making it difficult or impossible for students to put in the required time for that exercise. Technical education teachers are force to share the class in small groups so that each child could use the workshop.

This situation is further worsened because of the time allocated for practical lessons. Some students of the technical colleges might end up not being fully engaged in the practical lessons that comes only once or twice a week. The economic crisis that hit Cameroon in the 90s worsened the situation.

Some of the equipment given to technical schools as grants at times does not satisfy Cameroon's own need. Some other equipment in the technical workshops is outdated and sometimes was mis-matched to Cameroon's own context. The machines cannot be manipulated by teachers or students. The machines are seen in the technical workshops as 'window dressing'.

According to Cameroon NIS, (2010) stipulates that more than half of all technical institutions (57.2%) do not have functional workshops. This percentages narrows from urban centres to the rural area and from one region to another. This difficulty in terms of technical workshop is a serious to technical education and vocational training. The accompanying facilities like water, electricity in technical workshops are not available. How can the students go about with practical in this deficient workshop, how can they operate machines where electricity is absent? The challenges at the level of technical workshops in Anglophone Cameroon are enormous. This difficulty affects the practicals which make part of technical examinations like CAP, Probatoire, BACC and Technical GCE.

In 2011 following Prime Ministerial decision No-2211/2141/Pm of 05/08/2011 over 65 technical secondary colleges were opened in Cameroon and Anglophone Cameroon inclusive but it is disturbing that the creation of this technical high schools and uplifting of some technical colleges could not boast of adequate technical workshops. Some of the newly created Government Technical colleges especially in the rural areas cannot boast of two technical workshops.

Technical Education during the Post-Independence Era

At independence, French Cameroon had about 71 technical schools with a student population of 5.740. These were actually vocational schools not technical schools. Thirty-one of these institutions were State-owned with 2.691 students.

On the other hand, the then West Cameroon (Southern Cameroons) could boast of only one vocational school –the Ombe Trade Center (Ndongko & Tambo 2000). In 1967 the center was transformed into Government Technical College Ombe where the students obtained the London City and Guilds Examination at various levels (Teacher's Voice, 2007).

In the 1970s, the Francophone sub system of technical education and assessment was imposed in all technical schools. Curriculum of these technical schools followed the French shift to a model with less emphasis on vocational subjects. More Grammar subjects were added into the curriculum. The vocational school ended up as "Poor Cousins" to the academic secondary schools and students used them to prepare for High Education (Namondo, 2009). Vocational training and preparations in technical schools were greatly weakened and sacrificed to make more space for more academic subjects that were not meant for skilled acquisitions. Following the plebiscite held in British Southern Cameroons on Feb. 1961 by they agreed to achieve independence by joining the Republic of Cameroon. In July 1961, a Constitutional Conference was held in Fouban to decide the terms of the union.

This constitution, in its articles 5 and 6, stipulated that, "The Federal Government was to organize and exercise control

over higher education and scientific research, secondary general and technical education. Administratively, there was a marked structural change in the development of Education (Fonkeng, 2010). The Cameroon educational system was subdivided into two systems (French and English sub-systems).

During the early years of economic development of Cameroon, the Government had as its priority to provide and expand primary, secondary and technical and vocational training schools. In the 1980s onwards, the government of Cameroon embarked on improving the quality of technical education.

When President Paul Biya took over power in 1983, investing in education became his priority generally and technical education in particular because it was considered as the motor for the country's socio-economic development as it was stated Cameroon Tribune, July 1986. Ndongko and Tambo (2000) holds that the government realized that without well trained technicians, the nation cannot change from Agrarian economy to an industrial one. The government therefore engaged to open up technical colleges all over the country. Hence technical colleges sprout like mushrooms in all regions, divisions and all sub divisions in the country. In the 1990s too, the World Bank reminded African countries on the need to improve their technical education and vocational training on their developmental agenda. Cameroon was not left out. The World Bank Report has revealed that high cost of training, poor quality training and the complete mismatch between training and labour market must be rectified so as to curb down unemployment among graduates (African Union, 2007). This awareness created by the World Bank, caused many African countries to realize the vital role technical education had in their development because technical education produce "job creators" and not "job seekers". The Cameroon government in an attempt to embark on technical education, designed schools that will turn our artisans and semi-skilled technicians who should go immediately into the rural areas to work. This explains why they doted a few SAR/SMS around the country. These long outlived their usefulness as better qualified people came in from neighboring Nigeria to full the local market. Today, the Cameroon market is filled with, technicians from Nigerian polytechnics. This necessitated the need for technical schools to be opened.

After reunification, it has been noticed that the few factories and industries in the English speaking part of Cameroon were long destroyed in favour of those in the French Territory such as the power plant at Yoke, the Timber industry in Etam 1, and the Bota wharf.

All attempts to run technical schools failed surely because of the cost involved. It cost 4 to 5 billion to build and equip a technical secondary school and doubles the amount for a technical high school. Both the technical schools opened by the state and those by the churches could not continue because of the huge capital that was needed to do so.

The government created Cameroon College of Arts, Science and Technology (CCAST) in Bambili, but the Technology department has never started till today. The technical department in Saint Augustine's College Kumbo died in the Seventies, St Paul's Technical College Bonjongo, St John's

Technical College Nchang and Christ the King Technical College Tiko, all in the Catholic Diocese of Buea are now all only Commercial/Grammar School (Foleng, 2006).

With the creation of the Ministry of National Education, by Decree No 72/381 of 7th August 1973, the First West Cameroon Education Policy was released in 1963 and the first paragraph of this policy stated that "the government believes that Education is an investment in human material which can reap dividend. No policy for education can be relevant unless it takes into account all economic, social and spiritual factors of our time and circumstances." (Nfor, 1975). Educational provisions in West Cameroon were designed following British designs. It should be noted that during this initial stage of national efforts in education, there was a high proportion of schools controlled by Christian Mission and Lay- Private and technical and vocational Schools inclusive.

The technical and vocational system of education is considered by some authors to have been proposed to some African countries by colonial masters during the transition from Colonialism to independence as a means of reinforcement of the elitist, Colonial society (Nekhwevha, 1999). The national government in West Cameroon did not have money to embark in the opening of schools and faced with increasing demands, was obliged to encourage the private and mission to operate schools. As concerns technical and vocational colleges we saw the birth of Vocational College of Arts Science and Technology (VOCAST) Muyuka, Saint Paul's Technical College Bojongo, Saint John's Technical College Nchang-Mamfe. These schools operated with a lot of difficulties and in the seventies. Some of them shut their doors as mentioned before.

As years ran by, the government of Cameroon opened some technical colleges like Government Technical College Kumba that was inaugurated by President Ahidjo. Others cropped up in Bamenda and Wum in the North West Province of Cameroon. Technical Colleges like Government Technical High School Wum, Government Technical High School Bamenda were opened.

Comparatively, the situation in Cameroon East of the Mungo, between 1972 and 1984, saw the opening of more technical and vocational schools. In Cameroon West of the Mungo, these technical and vocational institutions were few in number in English- Speaking Provinces (Fonkeng, 2010). Education in Cameroon in general witnessed some shortcomings which resulted to the rate of enrolment reduced to ten percent (10%) in the 1990s for 6-14 years and stabilized around 65%

In the 1990s Cameroon faced a severe Economic crisis and this greatly affected the development of education. In the sixth Five-year Development Plans (1986-1991) emphasis was placed on technical and vocational education which has not yet gain importance in the previous plans in spite of its impact on the socio-economic efforts of the country.

It was also realized that they have been delays in the creation of technical high schools in the English-Speaking Cameroon provinces. Nothing sudden was done because of the Economic Crisis. This plan suffered some set back because of the introduction of Structural Adjustment Plan imposed by International Monetary Fund. Thanks to

financial assistance from the Canadian government; the government has created Technical colleges in almost every division in English-Speaking Provinces of Cameroon.

Mission of Technical Vocational Education Training TVET, known in Cameroon as l'enseignement et la Formation Techniques et Professionnels (EFTP), aims to create a trained workforce for various employment sectors and increase understanding of technology. TVET programmes also intend to allow individuals to fully participate in society as responsible citizens.

The Technical and Vocational Education and Training in Cameroon is regulated by a series of legislative and strategic documents. Some of them include:

The National Forum on Education and Training, the Education Orientation Law (1999) and the fully-fledged Poverty Reduction Structural Programme (PRSP) (adopted in April 2003) provide main guidelines in this area of education and training. The Orientation Law laid down guidelines for the reform of technical education and vocational training as follows:

- A. Vocational training should develop specific skills for employment.
- B. Corporative education in customary
- C. Training should be developed in close collaboration with socio-professional environmental and
- D. Conditions of admission to technical middle and senior secondary schools should be raised.
- E. Education as a whole in Cameroon saw some changes following the amendments of the Constitution in 1996. This amended constitution signed in the 18th of January 1996 and its preamble states that the state shall guarantee the child's right to Education, primary education should be compulsory, the organization and supervision of education at all levels shall be the burden duty of the State.
- F. Article 26 of part IV, the constitution which talks about the relation between the executive and the Legislative power, stipulates the educational system is reserved to the Legislative power.
- G. Article 11; 22 talks about the professional training which will be involved in the formulation and implementation of technical and vocational training policy
- H. Article 6: the state shall guarantee equal opportunities for Education for all without discrimination as to gender, political, philosophical or religious opinion, social, cultural, linguistic or geographical origin like in the nursery, primary, general education colleges and high schools, technical or vocational, general and technical teachers-training-colleges and distance education.
- I. This amended constitution also emphasized on the idea that technical education should encourage creativity and prepare the citizens towards professionalism.
- J. The importance of technical education cannot be underestimated as in February 1995 an International Meeting entitled "Audience Africa" which was convened in Paris, France and highly attended by several African Heads of States and other interested parties to re-examine the face of new challenges around the globe. Amongst several recommendations arrived at Technical Education should be given serious attention. TVET plays a vital role in individual and National Development.

- K. In November 2001, UNESCO adopted a recommendation concerning technical education. This document directed member states including Cameroon to take whatever action necessary to put in place the recommendations.

The Law of Education Orientation (1998): The education system is a major national priority with bilingualism being a uniting factor and symbol of integration at all levels. A judiciary framework for the Cameroon educational system was established and an introduction of TVET post-primary education programmes.

Education General Assembly (1996): Laid emphasis on decentralizing education organization and administration, finance and partnership and the training of both government and private staff.

The number of technical colleges in the country and their enrolment between 1986/87 could be seen on table below. The English-Speaking Cameroon had eight public technical colleges with student enrolment of 3099.

Table 4: Number of Public Technical Colleges and Student Enrolment in 1986/87

Region	Number of Colleges	Student Enrolment
Adamawa	1	239
Centre	8	4689
East	4	1505
Far North	3	1485
Littoral	8	4953
North	2	1081
North West	4	1935
South	3	1164
South West	4	1164

Source: Adapted from Ndongko and Tambo (2003)

The Education Plan 2013-2020: A strategic study for the expansion TVET and diversification of TVET programmers. The Vocational Education Strategy 2008; validated by the Ministry of Employment and Vocational Education (Ministere de l' Emploiet de la Formation Professionnelle) (MINEFOP) in 2008. Vocational education is to be the attainment of professional training qualifications in extracurricular training centres, non-formal learning environments as well as vocational training programme like apprenticeship. This strategy recognizes vocational education as a pathway normal and accelerated socio-professional integration and wages. This strategy envisages improvement of the TVET programmes by placing MINEFOP as the guarantor.

The Education Sector Strategy Plan 2006-2012 aimed to improve the education system by increasing the education financial budget and investing in TVET programmes amongst others programmes. The strategy stressed the importance of TVET by recognizing vocational education as a means to professionalise the Cameroonian education system. The strategy aimed to: Develop vocational education programs in order to improve the quality of training, workplace productivity, and limit student drop outs (for example, 50% of primary, secondary and higher education drop outs were planned to be orientated towards TVET); Make TVET socially acceptable and financially feasible and Introduce vocational training as a post-primary education alternative.

The full-fledged PRSP has defined the following strategic areas for the 2003-2018 period. Focus on the creation of specific pilot technical and vocational educational institutions by ecological environment with a view to capitalizing on the opportunities offered by this area; Reorganize curricula and training areas in collaboration with the socio-professional environment, civil society and local and international partner; Conduct studies on the training needs of the labour market; Strengthen existing structural capacities by equipping educational institution' workshops; and Sensitizing populations to the importance of technical education and vocational training with a view to improving people's poor perception of technicians' expertise.

The National Educational Plan for All (Plan d'Action National de l'Education Pour Tous 2002 (PLAN-EPT) seeks to address TVET by promoting equal access for youth and adults to training programmes.

Vocational education and training courses are offered by various colleges as an alternative to the secondary academic education programme. TVET programmes are offered in English and French and graduates have access to higher professional training courses at undergraduate and postgraduate levels respectively. Secondary vocational education programmes are structured as follows;

1. The rural craft schools which offer two-year course in carpentry masonry, poultry and agriculture for those who may be too old for secondary education, with the aim of stemming rural flight. There are so far 10 rural craft schools in Cameroon (Atayo, 2000).
2. Domestic science schools which are about 100 in number offer a two-year programme for girls who have not gone to secondary school.
3. Technical and vocational high schools and colleges were fewer in number. They offered three-to four year courses in Civil Engineering, Electricity and Electronics, Maintenance and Production Engineering, Dress-making, Clerical Duties, Economics and Commercial Duties, and Industrial Studies.

The qualification obtained after completing higher professional education depends on the programme enrolled in. Below is an overview:

- I. First cycle programmes last for 3 years (2 year nominal plus one extra year).
- II. Medicine programmes lasts for 2-3 years
- III. Engineering programme duration varies.
- IV. Second cycle programme duration varies.

Non-formal TVET programmes are provided by various ministries (Agriculture, Culture and Youths). For example, the Ministry of Youth establishes youth training programmes and the Ministry of Agriculture organizes apprenticeships. Cameroon has a significant informal sector and a great deal of vocational training is done in informal settings. However, little of these activities are documented. An example is the Groupement Interprofessionnel des Artisans (GIPA), an organization made up of craftsmen, provides traditional apprenticeship to improve the instructional skills and training levels of its masters.

In 2011, the Head of State made a policy State during his campaign for re-election to the presidency, stating that Cameroon will become a huge construction site and by 2035 an emerging Nation. Consequently, the demand for technical education is seen as spring-board of this dream. This vision was followed by actions and the Prime Minister year after year signed decisions creating technical secondary colleges and technical high schools.

In 2011 following Prime Ministerial decision N° 2211/2141/Pm of 05/08/2011 sixty five (65) new secondary technical colleges (GTC) were opened in Cameroon. Decision N° 2011/2142/Pm of 05/08/2011 transformed twenty eight (28) secondary technical colleges into technical high schools (GTHS). Article two of both decisions stated the Minister of Secondary Education will affect their opening depending upon available means.

It should be emphasized that the creation and uplifting of these colleges to technical high schools did not meet their required demands in terms of infrastructure, equipment, personnel and other facilities that are required for good technical education. In most cases these technical colleges lacked manpower, infrastructure among others. Some of them lacked water and electricity and even practical workshops. These challenges might have had an impact on technical secondary school students' academic performance in public examinations,

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Table 5: Number of Public Technical Colleges and Technical High Schools in Cameroon & their enrolment in 2011

Region	Schools							
	G.T.C	G.T.H.S	G.T.C			G.T.H.S		
			F	M	Total	F	M	Total
Adamawa	06	06	380	1581	1961	1075	4149	5224
Centre	67	25	6007	10183	16190	10525	17810	28335
Extreme North	16	07	788	1469	2257	1999	6751	8750
Littoral	12	16	979	1880	2859	9060	12617	21677
North	11	07	1264	2845	4109	1239	6833	8072
North West	54	13	3960	7874	11834	4022	9942	13964
West	37	21	3578	5708	9286	7436	21163	28599
South	41	09	1932	2992	4924	2702	5262	7964
South West	41	09	2215	5186	7401	1453	5597	7050
Total	228	124	21682	40689	62371	42415	96936	13935

Source: Directorate of Technical Education, MINESEC, 2011

More creation of Technical Secondary Colleges in August 2014 by Decree N° 2014/2353/PM of 4th August 2014 Cameroon Tribune N° 10650/6849 of Tuesday August 12, 2014. www.Cameroon-tribune.com. More 50 Technical colleges were created in 2014. Still no match with infrastructure and personnel. These numbers were created in Meme and Fako Division as indicated in the table below:

In Cameroon, four Ministries are charged with the responsibility of providing education. They include; The Ministry of Basic Education (MINEDUB). This Ministry takes care of Nursery and Primary schools, Ministry of Secondary Education (MINESEC) is in charge of general and technical education as well as teachers training colleges (ENIEG) and the technical teachers training college (ENIET). The Ministry of Employment and Vocational Training (MINEFOP) is in charge of post primary education and vocational training in SAR S/M and other vocational training centres. Students of these institutions upon completion can continue to secondary technical colleges to acquire a more elevated qualification like CAP, Probatoire, BACC etc. The Ministry of Higher Education (MINESUP) takes charge of post-secondary education to the various universities, polytechnics, among other. This ministry is also charged with the responsibility of training secondary school teachers for both technical and general education in higher training schools like the Higher Teachers' Training College (ENS) which has the first and second cycles, the Higher Technical Teachers' Training College (ENSET) are found here for the training of secondary technical teachers for first and second cycles.

The above mentioned ministries played an active role in vocational and technical education in Cameroon. In Nursery and Primary Schools, lessons of the acquisition of skills are found in their program like handwork, which gives the pupils the opportunity to be creative and produce articles like basket, mats, mold pottery, making of thatches among others.

The idea of handwork is more practically in rural schools than schools found in the cities where the pupils may instead pay for their handwork and earned marks. The goal of technical and vocational education stipulated in the National Education Forum of 1995 is to establish a link between education and unemployment in terms of the socio-economic realities of the country, define guidelines to facilitate the teaching of subjects that will support a free-market economy and self-employment.

Education that can be able to put food on the table. In a nutshell, the main objective of TVE is to bring out technocrats who will be able to manage the development of their country.

Like any other form of education it must be backed at completion with the acquisition of certification after evaluation in public examinations like CAP, Probatoire, BACC, Technical G.C.E O/L and A/ Levels.

Most studies carried on technical education and vocational education exposes the aspect that the graduates are flooding their market without jobs but this work will evaluate the challenges of technical education and its impact on Anglophone secondary school student academic performance in the public examinations.

Cameroon like most developing countries as engaged seriously on the development of its educational sector and more emphasis on TVET and in her vision 2035, Cameroon will be an 'Emerging Nation'. The objectives of the National Education of 1995 are so elaborated to meet this dream. The government of Cameroon has been contributing towards the financing of education for instance during the fiscal year 2015, the state allocated nearly 15.5% of its total budget to education. Many technical colleges were opened in Anglophone Cameroon

Challenges of Technical Education and Vocational Training

According to Cambridge English Dictionary, challenge is something needing great mental or physical effort to be done successfully, or the situation of facing this kind of effort. For instance, finding a solution is one of the greatest challenges faced by scientists. In this context, a challenge simply means something that impedes the smooth functioning. In this case those impediments to the maximum functioning of technical education and vocational training. Secondary Education refers to the formal education level that exist between primary and higher education (Caillods, 2010). The organization of secondary education varies from one country to another in terms of provision, content, length and the school age (Acedo, 2002; Alvarez et al., 2003; Di Gropello, 2006; UNESCO, 2001a ; Verspoor, 2008). Secondary education in Cameroon is that level of education after primary school and transition from primary school to lower secondary ranges between 9 and 13 years. The duration for formal secondary is seven (7) years in both Anglophone and Francophone sub-systems of education. Secondary education is offered in two forms; Grammar and Technical which has two cycles that is the First and Second Cycles. Secondary education in Cameroon as a whole and technical education and vocational training in particular faces several challenges. These challenges are not different from those in Sub-Saharan African countries. These challenges ranges from lack of facilities and materials to train students like the technical workshops ,inadequate technical teachers or facilitors, financing, resource management challenges, curriculum challenges (Ndongko & Tambo 2010 ,Uwaifo 2010).

The challenges are visible in the technical and vocational training institutions in Anglophone segment of the country where technical education is relatively new as compared to the Francophone regions of the country. This section is based on the challenges of TVET in Cameroon.

Inadequate Finance:

The financing of educational institutions all over the world depends on adequate support to meet up the cost their running so as to achieve their stated goals. The Law No. 98/004 of 14 April 1998, section 12 lay guidelines for education in Cameroon which states that education shall be financed by budgetary allocations from the state, contributions from education partners, budgetary appropriation from regional and local authorities, donations and legacies and other contributions provided by the law. These sources of finance for education have classified into three broad headings; public sources, private sources and foreign agencies (Mbua, 2002). For lay-private and denominational institutions obtain their incomes from their fees they charged on students, income from investments, grants and gifts.

Even though, these sources of finance for education are abundant as mentioned above but they are inadequate. This inadequacy has been raised as a primordial cause for much of the challenges faced by secondary education in general and technical education and vocational training in particular. This adequacy in finance is seen in the whole chain of the educational system like developing new educational ventures, improving on infrastructures, continuous professional development, innovations in education as a whole. The budget allocation for secondary education for 2014 stood at 233.628 million CFA, in 2015, it was 251.778 millions. At the first sight, it seems the amount is huge but it is too small for the running the affairs of secondary education as a whole.

The state budget allocated for education generally in Cameroon is averagely 15%. This is too low when compare when some countries with the same stage of development and they have higher percentages. For TVET in particular, it requires a lot of funding to buy the required machines for the various trades, building technical workshops and equipping them. To build and equipped a technical secondary school will cost 4 to 5 billions CFA and it will double for a high technical school (Nashlai, 2008). From the above illustration, we realized that the finance allocated for secondary education in general and technical education is grossly inadequate considering the numerous technical schools and vocational training centres that are operational in both parts of Cameroon. It should be emphasised that at the end of the academic year individual public schools do propose their current budgets but these are not taken into considerations as the Ministry of Secondary Education and in collaboration of that of Finance are the ones who decide the final allocations of both investment and current budget. This poses a serious challenge to schools in general and technical education and vocational training centres in particular as they always show disparity of they demand and what is allocated (Tamukong, 2004).

As earlier mentioned, the lay-private and denominational institutions do provide technical education in Anglophone Cameroon and they entitled to annual government subventions. These subventions assist them to pay salaries of teachers in their institutions. These subventions are inadequate and irregular (Mbua, 2003). This financial challenge might have an impact on student academic performance.

Inadequate Number of Personnel

Many technical secondary and vocational training centers across the country as whole and Anglophone Cameroon are inadequately staffed both qualitatively and quantitatively. A good number of teachers of these institutions are holders of DIPLET I and II from first and second cycles of HTTTCs and ENSET, DIPES I and II from ENS across the country, Grade I from ENIET and other private institutions. Some teachers are holders of BACC and related qualifications who serve as part timers in these schools. The biggest challenge here is at the level of available professional, well-trained and well supported teachers and distribution within the territory. As concerns technical education, the government has opened technical and vocational training in almost all the subdivisions to meet the 'Vision 2035' but technical teachers are not enough. For instance, Government Technical College Lipenja in Ndian Division of the South West Region could

boost of two trained teachers and others are untrained part timers. In GTHS Ombe, the situation is different with a large proportion of teachers are trained teacher. Hence, there is a discrepancy between rural technical and vocation training institutions in the rural and urban centers. This is a big challenge and might student academic performance. The challenge of recruiting teachers does not lie on just the numbers, but in the provision of quality teachers. Technical and vocational training centres in the sub urban areas in Anglophone Cameroon have many who are under qualified, poorly paid and with a low social status. A greater majority of the urban institutions are proliferated with high proportion of trained teachers from ENSET Douala, HTTTCs Kumba, Bambili, Bertoua and the various ENS in the country. According to UNESCO Report, as concerns teacher shortages in the years to come in Sub-Saharan African zone, close to 1/3 of the countries suffering from teacher shortages, The shortages are visible in technical and vocational training centres and the need to recruit more technical teachers that will impact student academic performance. According to (Cameroon NIS, 2010:55), the average staff number per secondary school is 59:40 permanent and 19 temporary staff. Among the permanent staff, 7 are on duty in administration and in the classroom, 5 work only in administration and 28 are teachers. This standard is never respected and this leads to another challenge in technical secondary schools and vocational training centres as earlier illustrated. This challenge has a multiplier effects where teachers are overloaded with teaching hours close to 40 hours per a week, teaching all subjects on time table while those in urban areas with 4 hours and at most 6 hours. The government expenditure on teachers' salary still remains considerably high. This challenge of teaching personels especially with Anglophone secondary school students of technical education especially those in the rural areas and this might impact students' academic performance in public examinations.

Inadequate Access:

The problem of access is a big challenge with technical education and vocational training in the country as whole and Anglophone Cameroon in particular. UNESCO Report (2015) affirms that access to good secondary education remains a problematic in many countries of world. The distribution of technical education in the past suffers the problem of access because technical colleges were found mostly at the Divisional headquarters but with policy of ruralisation, technical secondary are found at each Sub-divisional level but the greatest now is the level of infrastructures. Those technical institutions in the rural cannot show anything in terms of technical workshop facilities while those in urban can boost of some even though obsolete thereby making access condition to technical different and this impact student academic performance.

Poor Working Conditions of Teachers:

The working conditions for technical and vocational training teachers is worrisome in Cameroon as a whole and in Anglophone Cameroon in particular. The technical education and vocational training have a series of grievances as concerns teaching jobs. They are motivated as they are regarded as 'eaters of bitter leaves' because of their low salary point. They lacked offices, staff rooms, toilets and even security as teachers. They suffer hostilities from fellow colleagues, bosses and from the community. For instance, a

teacher is attacked for punishing a student at home. This insecurity is more in technical and vocational training where some parents have to dump their heady children.

Some technical education teachers faced the financial stress especially those newly recruits from training schools. They go for months and even years without salaries because of some bottlenecks which is bureaucratic at level of integration and too much centralization which poses a serious challenge to technical education and might impact student performance.

Insufficient Management of Resources:

School heads (Principals) are not trained formally on principles and theories of educational administration. This deficit has created a lot difficulty because they are not equip with skills to enable them manage the resources of the schools they are heading. As posits in Fonkeng and Tamajong (2009), that the rising cost of education demands training in prudent financial management and accountability. In Cameroon in general, heads of schools or principals are appointed by the Minister of Secondary Education. This appointment does not take into account the person's knowledge of educational administration. Some appointment following the hierarchical chain that recommendations comes from the immediate boss to the Divisional Delegate to the Regional Delegate and then to the Minister who appoints. Some are appointed overnight. Mbua (2003) attests that principals appointed in public secondary schools and technical schools inclusive are appointed from a pool of graduate teachers with teaching qualifications but without specialized preparation in educational administration. These deficiencies are glaring in the management of resource of the school. They managed the schools all alone, school property like school buses computers, gaz cookers for food and nutrition laboratory, school farms becomes their personal property. These tendencies are really big challenge to technical education. These might set a stage for lack of interest or motivation from teachers. It might cause shortages of materials for the learning and teaching process and its impact on technical secondary school students' academic performance in public examinations.

Lack of Pedagogic Materials:

Pedagogic materials are very important in teaching/ learning process and some education outcome like examinations. In technical education, many students lack textbooks. The lack of technical education can be seen at two dimensions. The unavailability of the textbooks especially in trade subjects like building construction, upholstery, engineering etc. At the second level, the low income of parents and who cannot buy the textbooks for the students. Some technical education textbook are written by French authors and poses a challenge to both students and teachers. It is not an exaggeration, 1 of out 3 students own a text work. Teachers too who need textbook to prepare their lessons, only 1 out of 2 teachers own a textbook in French Language, 3 out of 10 in Mathematics and 1 out of 10 in sciences. The introduction of computer as a pedagogic material for both teachers and students is inadequate in technical institutions. Some teachers and students cannot operate the computers. The computer numbers in technical education institutions are inadequate too and some are obsolete. For instance, the relationship between student and computer is 1:55. That is 55 students to 1 computer.

Health / AIDS/HIV Challenge:

Health challenges in general and HIV/AIDS have posed as great challenge to technical education and vocational training in Anglophone Cameroon. The students and teachers are either affected and are infected by this health challenge. This health challenge has greatly had an impact on education as a whole. The teachers who are infected by the HIV cannot adequately carry out his teaching because of illhealth and might affect student performance. The students too might be affected by the teacher's ill health and it might affect student academic performance.

At this junction, it is interesting to acknowledge that there are so many challenges that affect TVET in Anglophone Cameroon and all potentially impact the smooth operation of TVET and by extension student learning outcome. This research focus on the assessment on how technical workshops conditions, curriculum challenges and Teacher Quality might affect Anglophone secondary school students of technical education and its impact on academic performance in public examinations.

Statistics for technical education examinations for the past years as indicated below shows the percentage of pass in both North and South West regions (Anglophone Cameroon). The CAP results in the North West region is presented as follows. In 2011 percentage passed was 42.24%, in 2012 49.34 %, in 2013 30.5% in 2014 43.33% , 2013 45.78%, 2014 27.59 % and 2015 54.42%.

For Probatoire Brevet de technician, result statistics also revealed percentages slightly above 50% and Probatoire de technician also recorded percentages that are not encouraging and there slightly above 40%.

For GCE technical both at Ordinary and Advanced Levels presented the following results. In 2011 Ordinary Level passed was 38.24% while Advanced Level was 40.65%. In 2012 Ordinary Level scored 40.25% and Advanced Level scored 49.96%.

In 2013 Ordinary Level registered 45.25% and Advanced Level registered 65.9%.

In 2014 Ordinary Level registered 32.47% while Advanced Level 55.7%.

In 2015, Ordinary Level registered 45.9% and Advanced Level 64.24%.

In 2016 Ordinary Level registered 40.12% and Advanced Level 54.33%

In 2017 Ordinary Level 28.49% and Advanced Level 22.36% as indicated by the Cameroon CGCE Board, Buea.

Qualitatively, the results of CAP, Probatoire and BACC have not registered good grades as most of successful candidates have average pass commonly known as 'passable' in French. This is worrisome and questionable. Is it because of the challenges of technical education like the state of technical workshops, teacher quality and the curriculum of technical education.

The tables 1-8 on appendices indicates the performance of Anglophones secondary school students of technical education between 2012 and 2017 by specialty and centre.

Table 6: Advanced Level Technical Success Rate by Centre Type, from 2012 to 2017

Year	Parameters	Denominational	External	Government	Non-denominational
2012	Registered	645	1811	130	1721
	Sat	639	1735	129	1706
	Pass	431	468	57	810
	% Pass	67.45	26.92	44.19	47.48
2013	Registered	608	2146	162	1652
	Sat	607	2081	160	1642
	Pass	540	1072	94	1243
	% Pass	88.96	51.51	58.75	75.5
2014	Registered	709	2103	232	1755
	Sat	708	2015	229	1735
	Pass	590	709	130	1212
	% Pass	83.33	35.19	56.77	69.86
2015	Registered	851	2855	244	1542
	Sat	851	2826	244	1542
	Pass	744	1383	152	1230
	% Pass	87.43	48.94	62.3	79.77
2016	Registered	741	2774	311	1453
	Sat	739	2720	311	1448
	Pass	645	1046	156	1081
	% Pass	87.28	38.46	50.6	74.65
2017	Registered	819	1384	209	1165
	Sat	420	963	94	765
	Pass	168	250	22	239
	% Pass	40	25.96	23.4	31.24
Overall	Registered	4373	13073	1288	9288
	Sat	3964	12340	1167	8838
	Pass	3118	4928	611	5815
	% Pass	78.7	39.9	52.4	65.8

Source: Cameroon GCE Board Statistics Bureau

Table 7: Ordinary Level Technical Success Rate by Centre Type, from 2012 to 2017

Year	Parameters	Denominational	External	Government	Non-denominational	Overall
2012	Registered	1066	2922	1062	2226	7276
	Sat	1032	2649	1046	2171	6898
	Pass	677	697	488	1043	2905
	% Pass	60.76	24.42	46.65	48.8	42.11
2013	Registered	1105	3320	1352	2073	7850
	Sat	1078	2943	1322	1865	7208
	Pass	707	810	661	1088	3266
	% Pass	65.58	27.52	50	58.34	45.31
2014	Registered	1152	3275	1403	2183	8013
	Sat	1107	2922	1372	2022	7423
	Pass	574	563	518	755	2410
	% Pass	51.85	19.27	37.76	37.34	32.47
2015	Registered	1424	4098	1586	2047	9155
	Sat	1286	3641	1547	1917	8391
	Pass	886	1222	786	1148	4042
	% Pass	68.9	33.56	50.81	59.89	48.17
2016	Registered	1531	2314	2314	2197	8356
	Sat	4253	3552	2231	1953	11989
	Pass	810	1115	1025	1166	4116
	% Pass	63.78	31.39	45.94	59.7	34.33
2017	Registered	1083	1726	559	1295	4663
	Sat	319	1076	193	748	2336
	Pass	150	328	56	352	886
	% Pass	47.02	30.48	29.02	47.06	37.93
Overall	Registered	7361	17655	8276	12021	45313
	Sat	9075	16783	7711	10676	44245
	Pass	3804	4735	3534	5552	17625
	% Pass	41.9	28.2	45.8	52	39.84

Source: Cameroon GCE Board Statistics Bureau

Table 8: Advanced Level Technical by Specialties Rate by specialty, from 2012 to 2017

Specialties	Parameters	2012	2013	2014	2015	2016	2017
ACO	Registered	907	894	1055	1139	115	968
	Sat	898	884	1045	864	112	605
	Pass	474	577	739	864	752	261
	% Pass	52.78	65.27	70.72	100.00	671.43	43.14
BSO	Registered	3034	3263	3222	3669	3269	2137
	Sat	2971	3202	3130	2365	3267	1420
	Pass	1134	2086	1619	2365	1687	381
	% Pass	38.17	65.15	51.73	100.00	51.64	26.83
NO	Registered	12					
	Sat	11					
	Pass	1					
	% Pass	9.09	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
SSO	Registered	47	55	84	77	82	27
	Sat	46	55	83	43	82	11
	Pass	29	37	55	43	81	6
	% Pass	63.04	67.27	66.27	100.00	98.78	54.55
BCO	Registered	133	199	248	338	460	178
	Sat	128	197	246	142	460	94
	Pass	57	157	130	142	270	25
	% Pass	44.53	79.70	52.85	100.00	58.70	26.60
ETO	Registered	146	184	187	235	278	153
	Sat	144	180	180	94	278	88
	Pass	70	121	97	94	134	3
	% Pass	48.61	67.22	53.89	100.00	48.20	3.41
FSO	Registered		2	3	5	16	6
	Sat		1	3	1	16	2
	Pass		1	1	1	4	0
	% Pass	#DIV/0!	100.00	33.33	100.00	25.00	0.00
No Spe	Registered		28		29	59	115
	Sat		11		0	0	29
	Pass		1		0	0	6
	% Pass	#DIV/0!	9.09	#DIV/0!	#DIV/0!	#DIV/0!	20.69
AC	Registered	4000	41212	4361	4885	4466	3133
	Sat	3926	4141	4258	3272	4464	2036
	Pass	1638	2700	2413	3272	2520	648
	% Pass	41.72	65.20	56.67	100.00	56.45	31.83
AI	Registered	279	385	438	578	754	337
	Sat	272	378	429	237	754	184
	Pass	127	278	228	237	408	28
	% Pass	46.69	73.54	53.15	100.00	54.11	15.22
Overall	Registered	8558	46222	9598	10955	9499	7054
	Sat	4470	4908	5116	3746	4969	2433
	Pass	3530	5958	5282	7018	5856	1358
	% Pass	78.97	121.39	103.24	187.35	117.85	55.82

Source: Cameroon GCE Board Statistics Bureau

Table 9: Advanced Level Technical by Specialties Rate by specialty, from 2012 to 2017

Specialties	Parameters	2012	2013	2014	2015	2016	2017
ACO	Registered	2824	2915	3092	3084	3108	1665
	Sat	2795	2876	3057	1738	1734	982
	Pass	1312	1452	1229	1738	1734	449
	% Pass	46.94	50.49	40.20	100.00	100.00	45.72
BSO	Registered	2306	2549	2478	3007	3174	1575
	Sat	2267	2514	2434	1280	1248	1032
	Pass	790	1008	646	1280	1248	367
	% Pass	34.85	40.10	26.54	100.00	100.00	35.56
CSO	Registered	143	146	171	156	179	35
	Sat	141	142	168	66	77	21
	Pass	69	66	43	66	77	7
	% Pass	48.94	46.48	25.60	100.00	100.00	33.33

NO	Registered	405		548			
	Sat	62		59			
	Pass	21		3			
	% Pass	33.87	#DIV/0!	5.08	#DIV/0!	#DIV/0!	#DIV/0!
BCO	Registered	624	723	739	999	1353	334
	Sat	618	718	729	441	539	116
	Pass	224	340	202	441	539	30
	% Pass	36.25	47.35	27.71	100.00	100.00	25.86
ETO	Registered	513	499	628	710	765	217
	Sat	512	494	622	330	358	98
	Pass	185	198	156	330	358	24
	% Pass	36.13	40.08	25.08	100.00	100.00	24.49
FFO	Registered	68	69	58	50	59	41
	Sat	67	66	58	22	18	17
	Pass	23	31	23	22	18	3
	% Pass	34.32	46.97	39.66	100.00	100.00	17.65
HEO	Registered	184	179	108	168	145	85
	Sat	179	179	107	76	76	20
	Pass	87	95	47	76	76	1
	% Pass	48.60	53.07	43.92	100	100	5.00
MMO	Registered	109	108	99	98	102	19
	Sat	109	107	98	33	38	8
	Pass	45	42	23	33	38	3
	% Pass	41.28	39.25	23.47	100.00	100.00	37.50
WWO	Registered	150	123	87	111	120	22
	Sat	148	120	86	54	26	8
	Pass	49	53	38	54	26	0
	% Pass	33.11	44.17	44.19	100.00	100.00	0.00
OC	Registered	5678	5610	6289	6718	6461	3275
	Sat	5265	5532	5718	4695	6460	2035
	Pass	2192	2526	1921	4695	3059	823
	% Pass	41.63	45.66	33.60	100.00	47.35	40.44
OI	Registered	1648	1701	1723	2433	2546	722
	Sat	1633	1684	1704	1846	2545	269
	Pass	613	759	489	1846	1057	61
	% Pass	37.54	45.07	28.70	100.00	41.53	22.68
Overall	Registered	14652	14622	16020	17534	18012	7990
	Sat	13687	14325	14742	10548	13081	4598
	Pass	5610	6570	4820	10581	8230	1768
	% Pass	40.99	45.86	32.70	100.31	62.92	38.45

Source: Cameroon GCE Board Statistics Bureau

Table 1: Baccalaureate Technic Success Rate by specialties, from 2012 to 2016

Specialties	Parameters	2012	2013	2014	2015	2016
ACA	Registered		88	128	143	108
	Sat		88	128	143	108
	Pass		78	102	126	104
	% Pass		88.64	79.69	88.11	96.3
ACC	Registered		42	50	46	38
	Sat		42	49	46	38
	Pass		36	39	44	34
	% Pass		85.71	79.59	95.65	89.47
CG	Registered		312	396	463	461
	Sat		312	390	461	457
	Pass		254	265	314	317
	% Pass		81.67	67.95	68.11	69.37
CI	Registered		6	8	4	2
	Sat		6	8	4	2
	Pass		4	7	4	1
	% Pass		66.67	87.5	100	50.0

F1	Registered	16	26	21	11	12
	Sat	16	26	21	11	12
	Pass	13	11	17	4	11
	% Pass	81.25	42.31	80.95	36.36	91.67
F2	Registered	34	88	70	46	36
	Sat	34	87	70	45	36
	Pass	9	18	19	34	21
	% Pass	26.47	20.69	27.14	75.56	58.33
F3	Registered	283	407	351	398	365
	Sat	282	406	349	396	365
	Pass	196	228	285	234	223
	% Pass	69.5	56.16	81.66	59.09	61.1
F4BA	Registered	364	629	610	455	253
	Sat	363	628	602	446	253
	Pass	90	221	274	356	190
	% Pass	24.79	35.19	45.51	79.82	75.1
F4BE	Registered	18	36	26	32	19
	Sat	18	36	26	31	19
	Pass	12	26	19	12	19
	% Pass	66.67	72.22	73.08	38.71	100
F4TP	Registered	50	72	56	30	16
	Sat	50	72	56	30	16
	Pass	20	33	35	14	16
	% Pass	40.0	45.83	62.5	46.67	100
F5	Registered	22	16	21	26	25
	Sat	21	16	21	26	25
	Pass	19	14	16	6	21
	% Pass	90.48	87.5	76.19	23.08	84
FIG	Registered		4	3	13	7
	Sat		4	3	13	7
	Pass		4	3	13	3
	% Pass		100	100	100	42.86
G1	Registered	40				
	Sat	40				
	Pass	36				
	% Pass	90.0				
G2	Registered	248				
	Sat	245				
	Pass	165				
	% Pass	67.35				
G3	Registered	88				
	Sat	88				
	Pass	32				
	% Pass	36.36				
Overall	Registered	1169	1728	1736	1665	1342
	Sat	1163	1725	1719	1650	1338
	Pass	596	930	1078	1159	960
	% Pass	51.25	53.91	62.71	70.24	71.75

Source: Cameroon GCE Board Statistics Bureau

Table 9: Probatoire de Brevet de Technicien 2015 to 2016

Specialties	Parameters	2012	2013	2014	2015	2016
EF	Registered				31	13
	Sat				28	13
	Pass				14	3
	% Pass				50	23.08
ESF	Registered				431	401
	Sat				426	398
	Pass				255	335
	% Pass				59.86	84.17
GTTO	Registered				62	62
	Sat				62	62
	Pass				16	35
	% Pass				25.81	56.45
IB	Registered				13	8
	Sat				13	8
	Pass				5	8
	% Pass				38.46	100
IH	Registered				260	273
	Sat				257	271
	Pass				95	240
	% Pass				36.96	88.56
IS	Registered				106	104
	Sat				105	104
	Pass				12	63
	% Pass				11.43	60.58
MA	Registered				377	437
	Sat				371	437
	Pass				58	120
	% Pass				15.63	27.46
MEB	Registered				417	505
	Sat				409	505
	Pass				4	166
	% Pass				12.12	32.87
MEM	Registered				34	36
	Sat				33	36
	Pass				4	17
	% Pass				12.12	47.22
MF-CM	Registered				403	432
	Sat				395	432
	Pass				132	228
	% Pass				33.42	52.78
MHB	Registered				15	10
	Sat				15	10
	Pass				10	9
	% Pass				66.67	90
MISE	Registered				80	90
	Sat				77	88
	Pass				39	77
	% Pass				50.65	87.5
Overall	Registered				2229	2371
	Sat				2192	2364
	Pass				644	1301
	% Pass				29.38	55.03

Source: Cameroon GCE Board Statistics Bureau

Table 2: Probatoire technique 2015 to 2016

Specialties	Parameters	2012	2013	2014	2015	2016
ACA	Registered				187	190
	Sat				185	189
	Pass				102	165
	% Pass				55.14	87.3
ACC	Registered				75	107
	Sat				74	106
	Pass				37	59
	% Pass				50	55.66
CG	Registered				633	784
	Sat				629	778
	Pass				361	605
	% Pass				57.39	77.76
CI	Registered				8	21
	Sat				8	21
	Pass				2	3
	% Pass				25	14.29
F1	Registered				58	46
	Sat				55	46
	Pass				7	14
	% Pass				12.73	30.43
F2	Registered				92	118
	Sat				91	118
	Pass				28	40
	% Pass				30.77	33.9
F3	Registered				999	1236
	Sat				985	1236
	Pass				227	587
	% Pass				23.05	47.49
F4BA	Registered				1696	1630
	Sat				1677	1630
	Pass				166	800
	% Pass				9.9	49.08
F4BE	Registered				38	48
	Sat				38	47
	Pass				1	43
	% Pass				2.63	91.49
F4TP	Registered				115	84
	Sat				114	83
	Pass				8	77
	% Pass				7.02	92.77
F5	Registered				81	99
	Sat				80	99
	Pass				6	64
	% Pass				7.5	64.65
FIG	Registered				7	13
	Sat				7	13
	Pass				7	4
	% Pass				100	30.77
Overall	Registered				3989	4376
	Sat				3943	4367
	Pass				952	2461
	% Pass				24.14	56.35

Source: Cameroon GCE Board Statistics Bureau

Table 10: Brevet Technic Success Rate by specialties, from 2012 to 2017

Specialties	Parameters	2012	2013	2014	2015	2016
EF	Registered		30	19	25	17
	Sat		29	19	25	17
	Pass		20	4	21	15
	% Pass		68.97	21.05	84	88.24
ESF	Registered	272	291	252	230	293
	Sat	269	288	250	227	291
	Pass	95	251	225	183	267
	% Pass	35.32	87.15	90	80.62	91.75
GTTO	Registered	36	43	48	32	34
	Sat	35	43	48	30	34
	Pass	13	28	15	7	18
	% Pass	37.14	65.12	31.25	23.33	52.94
IB	Registered		28	12	18	9
	Sat		28	12	17	9
	Pass		3	3	9	8
	% Pass		10.71	25	52.94	88.89
IH	Registered	191	250	222	273	244
	Sat	190	249	221	269	241
	Pass	12	205	67	93	225
	% Pass	41.05	82.33	30.32	34.57	93.36
IS	Registered	21	18	18	51	35
	Sat	21	17	18	51	35
	Pass	12	8	7	28	20
	% Pass	57.14	47.06	38.89	54.9	57.14
MA	Registered	105	168	163	157	175
	Sat	105	168	162	156	175
	Pass	47	129	79	21	163
	% Pass	44.76	76.79	48.77	13.46	93.14
MAV	Registered	14	16			
	Sat	14	16			
	Pass	5	16			
	% Pass	35.71	100			
MEB	Registered	194	325	229	306	282
	Sat	190	320	228	299	282
	Pass	19	216	133	154	246
	% Pass	10	67.5	58.33	51.51	87.23
MEM	Registered	25	45	34	35	30
	Sat	25	45	34	35	30
	Pass	11	24	15	7	22
	% Pass	44	55.33	44.12	20	73.33
MF-CM	Registered	210	213	195	186	221
	Sat	210	211	194	186	221
	Pass	50	158	113	94	140
	% Pass	23.81	74.88	58.25	50.54	63.35
MHB	Registered	16	2	19	7	10
	Sat	15	2	19	7	9
	Pass	15	2	18	7	9
	% Pass	100	100	94.74	100	100
MISE	Registered			40	33	50
	Sat			40	31	50
	Pass			34	23	48
	% Pass			85	74.19	96
Overall	Registered	1084	1429	1251	1353	1400
	Sat	1074	1416	1245	1333	1394
	Pass	229	902	600	553	1041
	% Pass	21.32	63.70	48.19	41.49	74.68

Source: Cameroon GCE Board Statistics Bureau

Hence, the challenges are still visible level that exists between primary and higher education (Caillods, 2010). The organization of secondary education varies from one country

to another in terms of provision, content, length and the school age (Acedo, 2002; Alvarez et al., 2003; Di Gropello, 2006; UNESCO, 2001a ; Verspoor, 2008). Secondary

education in Cameroon is that level of education after primary school and transition from primary school to lower secondary ranges between 9 and 13 years. The duration for formal secondary is seven (7) years in both Anglophone and Francophone sub-systems of education. Secondary education is offered in two forms; Grammar and Technical which has two cycles that is the First and Second Cycles. Secondary education in Cameroon as a whole and technical education and vocational training in particular faces several challenges. These challenges are not different from those in Sub-Saharan African countries. These challenges range from lack of facilities and materials to train students like the technical workshops, inadequate technical teachers or facilitators, financing, resource management challenges, curriculum challenges (Ndongko & Tambo 2010, Uwaifo 2010).

Statement of the Problem

Over the years, Anglophone technical secondary school students have not been performing well in technical public examinations like CAP, Probatoire, BACC and of recent Technical GCE at both Ordinary and Advanced Levels. This situation is worrisome to the extent that some centers scored 0% known as "neant" in the French language (Regional Delegation of Secondary Education of North West and South West Regions) or Nil in English Language. This might be linked to the challenges faced by TVET.

Investing in technical education has been the government of Cameroon priority because it was considered a motor for socio-political development of the nation as she desires to move from an Agrarian economy to an Industrial one. The government of Cameroon and her foreign partners like the Canadian and Japanese governments have provided huge assistance in the form of buildings and machines for technical workshops to enable the students of technical education to carry out practical exercises which is part of the public examination but this is still inadequate in terms of numbers for the various trades, mismatch of the machines to meet our context, out dated nature, cannot be operated by both students and teachers, cannot be repaired when they are bad because of lack of experience technicians and difficulties in acquiring the spare parts that are bad. These foreign partners have signed bilateral agreements with the government of Cameroon and one of the benefits of this cooperation is extended to the teachers of TVET who are offered scholarships to these countries to improve on professional skills who in turn extended to their students. The stakeholders of education in Cameroon would have expected the huge investment in technical education to produce more favourable impact on students' academic performance than what we have presently.

The government has carried out some reforms towards improving Technical Education and its performance in public examinations by opening up several Higher Technical Teachers Training Colleges (H.T.T.T.C) in the country like the H.T.T.T.C in Kumba, Bamibili, Bertoua and to add on the existing one in Douala to improve on teacher quality.

This inadequacy and inefficiency of technical workshops in Anglophone technical colleges might be a serious challenge that might influence technical secondary school students' academic performance in public examinations. This challenge does not only affect students alone. Most of the training colleges where teachers of technical education are

trained have insufficient and poorly equipped workshops and in some cases even absent. How can these teachers who are trained without technical workshops train their students of technical education when they themselves did not have technical workshop facilities.

The curriculum of technical education in Cameroon in general and Anglophone Cameroon in particular also post some disturbing weaknesses as follows;

1. They do not reflect the course-content, depended on predefined technical profiles
2. The course does not show clear (general and specific objective)
3. The courses are overloaded with Grammar school subjects such as History, Geography, Citizenship, French and English Language.
4. The theory and practice are not well coordinated.

Most African countries and Cameroon in particular, the theory and practice in technical secondary schools are not well coordinated. The numerous setbacks in technical education curriculum which might have an impact on students' academic performance in public examinations.

Of recent, some options like Hotel Management and Tourism which are options in the training schools but they have not been included in the program of Anglophone technical education in the Anglophone sub system. So teachers trained for these options are found teaching History, Geography, Citizenship in our technical secondary colleges.

Objective

Determine if technical workshops in Anglophone secondary school technical education impact student's academic performance in public examinations.

Research Question

Do technical workshops of Anglophone secondary school technical education impact students' academic performance in public examinations?

Teacher Quality

Ko (2003) indicates that Teacher quality is a general term for teacher cultivation, professional qualifications and abilities. Peng (1999), holds that the content of teacher quality can be categorized into: 1) common quality, 2) professional knowledge, 3) professional beliefs and attitude, 4) personality and 5) professional subject accomplishment. Teacher quality is defined as teachers engaging in education tasks, with certain characteristics, and being able qualified to conduct activities, arousing students' interest in learning, and enhancing students' learning achievements. From the above paragraph, it can be seen that teachers of technical secondary schools must possess the above qualities to create an impact on their students' academic performance.

Various schools of thought have put forward factors responsible for student's academic performance and one of them is teacher's quality. Constructivist scholars believed the environment is the most important factor that plays a role in students' achievements. According to Tambo (2003), students are immature and therefore do not have the ability and experience to determine the best knowledge and values that should be learned. This school holds that teachers should teach what they believe will be advantageous to the students in the future.

Ornstein/Levine (1989) support this views advanced in their argument that 'teacher is an authority whose knowledge in the field is not questionable.' On the other hand, the liberals believed that nature is responsible for student's academic achievement. This group believed the students should be allowed naturally to unfold their development. Biggs (1985), supports this view when he affirms that 'a child unfolded within that which nature or the creator has unfolded within him.' Following his expression therefore children should be able to develop naturally on their own without an any instruction from teachers or imposing their views on students.

Some constructivist also came with their arguments in relation to the subject matter. They argued that "teachers should not simply put information into children's mind. Rather children should be encouraged to explore their World discover knowledge reflect and think critically (Brooks and Brooks 2001) in Santrock (2004).

Their constructivist view therefore allows students to bring out their own competencies. This study seeks to examine how teacher's quality pose as challenge technical education and vocational training in the North West and South West Regions (Anglophone Cameroon) and student academic performance in public examinations like CAP, Probatoire, BACC. Goldhaber and Brewer (2000) are also of the opinion that the teacher quality has an impact on academic achievement when they argue that "the teacher is the most important educational factor predicting student achievements.

In technical colleges Cameroon in general and North West and/South West in particular, teacher quality is a primordial for student's academic performance and though teacher's quality varies from one teacher to another. This difference is more leaned or dependent on some characteristics or factors.

Teacher is seen as teachers engaging in education tasks, with certain characteristics, and being able qualified to conduct activities, arousing student's interest in learning, and enhancing students' learning achievements.

Ko (2003) believed that Teacher Quality is a general term for teacher cultivation, professional qualification and abilities. Peng (1999) holds that the content of teacher quality can be categorized into;

1. Common quality
2. Professional knowledge and abilities
3. Professional beliefs and attitude
4. Personality and
5. Professional subject and accomplishment

Wu (2003) on his part divided the aspect of superior Teachers Quality into 3 categories (1) Knowledge, (2) abilities and (3) Morals.

Teachers who are able to consistently assist their students in making significant academic progress. Teachers must have command of their subject matter, understand how students learn and have a broad repertoire of teaching methods to meet diverse needs of the students especially those of the technical colleges in the North West and South West Regions.

For anybody to assume the function as a technical teacher, such a person is expected to possess the needed

competencies to impart technical knowledge, skills especially now that the emphasis is on competence-based learning (Davis, 2001).

Today, Cameroon vision 2035 is aimed at retrieving Cameroon from the shackles of technological dependency on the West and Asian economies. So there is a great for quality teachers especially in technical education domain.

According to Henry Adams 'A good teacher affects eternity; he can never tell where his influence stops.' Every teacher aspires to be a good teacher, but what is his myth about being "a good teacher?" And how can you become a good teacher? Good teachers are rear but they are really assets to students especially those of technical colleges. If these teachers are good and competent, that is they planned their lessons based on instructional objectives which the learners

perception as concerns technical education solely depends upon the acquisition of skills. Good teachers are really an asset in students life and a blessing as they helps the students to discover their own ways, thoughts and motivates them to develop mentally with utmost confidence, good teachers are rare to find but when you find one you find gold. Good teachers recognized the strength of their students and add features that are lacking as well as deciphering their weakness. They also provide extra attention and tools to help the students to overcome their weaknesses and may play a role to slove technical education and vocational training students challenge in the North West and South West Regions of Cameroon and consequently their performance in public examinations.

METHODOLOGY

his study made used of the descriptive survey research design

The study was carried out in the North West and South West regions of Cameroon (Anglophone Cameroon). These regions make up 17% of the total population of the ten regions of Cameroon. The South West Region with Buea as capital and estimated population of about 1.481.433 according to 2013 population projection:(Cameroon (NIS) 2013) and covers a total surface area of 25.410 km sq which makes up about 5.45% of the national territory. The South West region before the crisis was regarded as a peaceful and hospitable region and hosts a cream of Cameroon's population from other regions of the country.

The South West region can be regarded as Cameroon in miniature as it represents Cameroon's political, social, culture, economic and ecological diversities. Administratively, the region is made of six divisions: Fako, Meme, Lebiale, Manyu, Ndian and Kupe Manenguba divisions broken up down into 32 sub divisions. The region is headed by a Governor while the divisions are headed by Senior Divisional Officers, the sub divisions are headed by Divisional Officers, all appointed by a Presidential Decree. In the education domain, the South West has a State University located in Buea with several lay- private higher institutions of Learning, secondary, primary and nursery schools. In order to facilitate management and enhance students' performance in the region, the educational sector is well structured, organized into the delegation of Basic Education and Secondary Education. These delegations are located in the Regional Capital of Buea.

The North West Region on the other hand is found in the western highlands with capital in Bamenda. The region has an estimated population of about 1.969 million people (according to 2015 population projects Cameroon NIS,(2015) and a total surface area of about 17.300km. sq. (6.700sq. miles). The North West is the 3rd most populated region of the country with inhabitants from other parts of Cameroon and neighboring Nigeria. Administratively, the region has seven divisions; Mezam, Bui, Donga-Mantung, Momo, Boyo, Ngokitungia, Menchum. These divisions are further divided into 31 sub divisions. The Region is headed by a Governor, the Divisions by a Senior Divisional Officers and the Sub Divisions by a Divisional Officer. All appointed

by a Presidential Decree. The basic unit of government is the Council and there are 32 Council in the region.

In the education domain, the North West Region has one State University located in Bambili, lay- private Higher Institution of Learning, numerous secondary, primary and nursery schools. In order to facilitate the management and improve students' performance in the region, the educational sector is organized according to two the delegations namely : delegation of basic education and secondary education. These delegations are located in Bamenda, the headquarters of the North West Region. There are 252 government of secondary general education schools and the number of technical

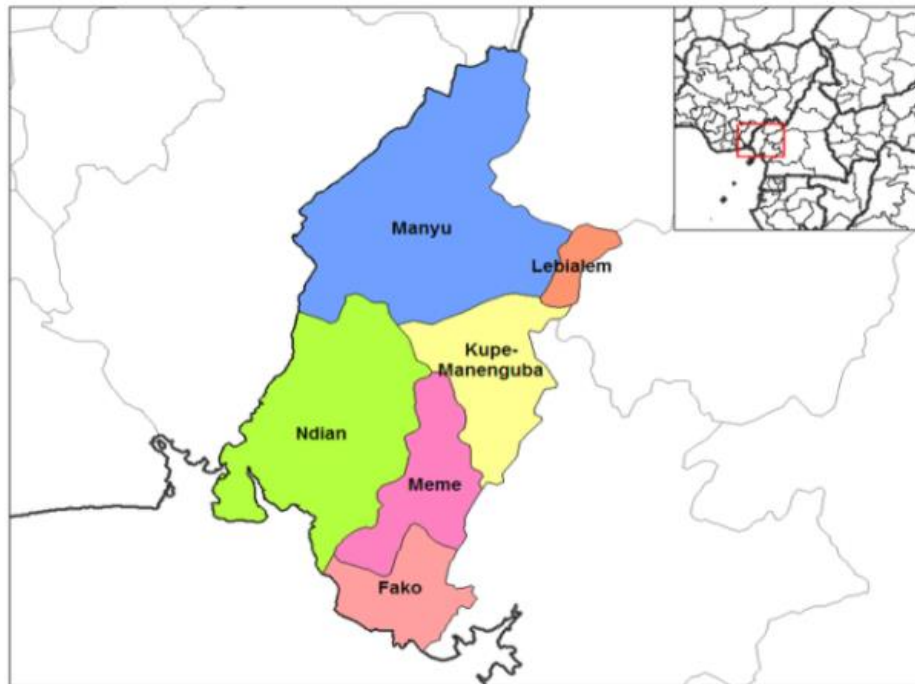


Figure 1: Administrative Map of the South West
 Source: Macmillan School Atlas of Cameroon, 2005.

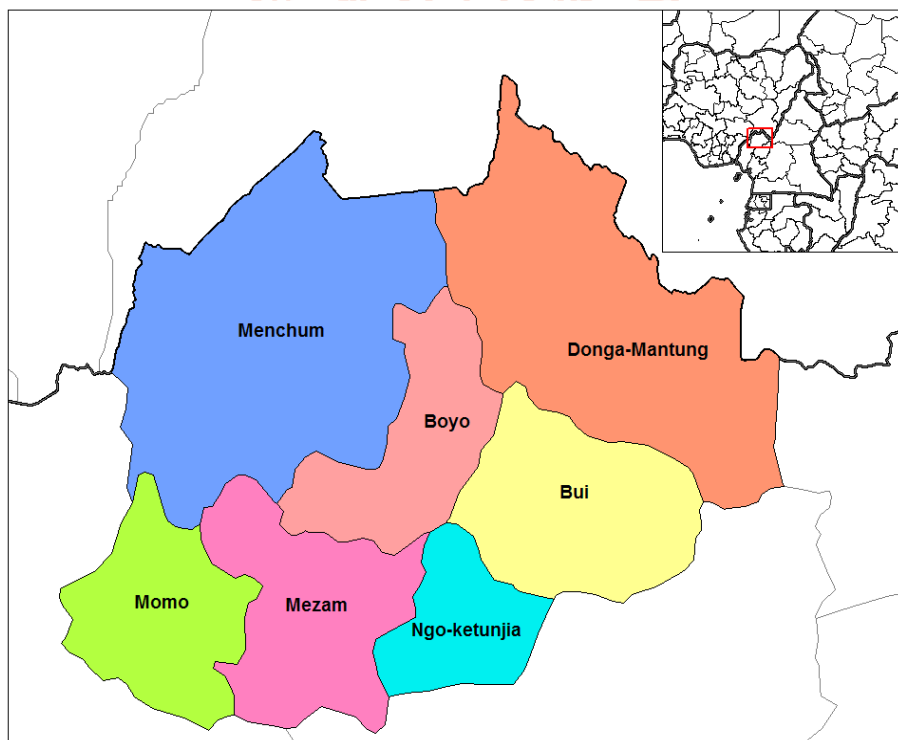


Figure 2: Administrative map of North West Region of Cameroon
 Source: Macmillan School Atlas of Cameroon, 2005.

The population for this study consists of all the technical secondary schools found in the Northwest and Southwest regions of Cameroon. In the Northwest region, there are 7 divisions namely: Momo, Menchum, Boyo, Ngokintungia, Bui, Mezam, and Donga Mantung while in the Southwest region, there are six divisions which are: Meme, Fako, Manyu, Lebialem, Indian and Kupe Maunenguba Division.

The target population of the study consisted of Technical Secondary Schools in four (04) divisions, two each from the North West and South West Regions of Cameroon. These are four divisions are Fako and Meme divisions in the South West and Mezam and Donga Mantung divisions in the North West.

Out of the total of 112 Technical Secondary schools in the four targeted divisions of the study, 11 constituted the accessible population of the study. Six (6) of the accessible schools were from the South West while five (5) were from North West Region. Among these 11 schools, 8 were public while 2 were lay private and 1 was denominational. Table 22 present the names of the 11 schools with their students and teachers' population.

The sample size for the study was made up of 739 students while that for teachers was 260. For pedagogic inspectors, 18 of them were sampled for the study.

The purposive, stratified and simple random sampling techniques were adopted for the study. As for the purposive sampling techniques, it was used in selecting the four divisions in the Northwest and Southwest that schools are actually on-going as a result of the on-going arm conflict that has resulted in many of the schools or all in a good number of the divisions in the Anglophone regions of Cameroon to shock down. In the four targeted divisions of the study, all the schools that are functional were first noted by the researcher and their names were taken down. Thereafter, the stratified sampling technique was employed whereby all the schools on-going were classified into three strata namely public, lay private and denominational. This stratification was done for each of the four targeted divisions. After the schools were stratified, by public, lay private, and denominational, the simple random sampling technique was used in each of the stratum in the different divisions targeted for the study to select the required number of schools.

To do this, the name of the schools for each stratum per division was written on separate pieces of papers. Thereafter, the papers were folded, placed in a bowl and were reshuffled. After they were reshuffled, a paper was then picked and the name of the school written on it was selected for the study. This exercise was repeated severally until the number of schools (11) required for the study from the four targeted divisions were gotten for the study. Finally, in each of the 11 schools visited by the researcher, the simple random sampling technique was used in administering the questionnaire to students and teachers who were willing to participate in the study after the purpose of the study was explain to the participants.

The major tools used in the collection of data for this research are questionnaires and interviews. The instruments were designed by the researcher in order to obtain reliable and valid information for the research.

The collection of data was carried out by the researcher with the help of research assistants and the teachers in the sampled technical secondary schools in Meme and Fako Division. Two days were given to each teacher to fill the questionnaire items. The whole exercise lasted two weeks. The process of responding to the questionnaires was explained to the students in order to ensure valid data were collected.

The questionnaires and the interview were in line with the objectives of the research. The questionnaire and interview were meant for the teachers, and the students. The questionnaire and interview were taken to the sample schools and given to various teachers and students.

The analytical guide follows the specific objectives of the study. At this stage, questionnaires that were not properly and completely filled were sorted out. The questionnaires were then attributed serial numbers that could help match them to the data base, if there was need for cross-verification. Data was entered using EpiData Version 3.1 (EpiData Association, Odense Denmark, 2008) and analyzed using the Statistical Package for Social Sciences (SPSS) Standard version, Release 21.0 (IBM Inc. 2012). Data clean-up (content clean-up and exploratory statistics): Exploratory statistics is an integrated part of data clean-up. Variables were explored to identify questionable entries, inconsistency in responses and outliers and their validity discussed to make the necessary corrections.

FINDINGS AND DISCUSSION

Findings and results are presented using tables, charts, code-grounding-quotation table and conceptual diagram will their respective presentations.

Students' Perspectives

Here we present the results on Students' perceptions on workshops for Anglophone technical secondary schools and academic performance. These are presented in Table 36.

Table 11: Students' Perceptions on Workshops for English Speaking Technical Secondary Schools and Academic Performance (n=739)

Statements	Stretch				Collapse	
	SA	A	D	SD	SA&A	SD&D
All the trades in the technical workshop in my school are adequately equipped	27.6% (204)	25.0% (185)	18.3% (135)	29.1% (215)	52.6% (389)	47.4% (350)
Anglophones students' performance in public examination would have been better if the technical workshop facilities were to be upgrade	45.6% (337)	37.6% (278)	7.1% (52)	9.7% (72)	83.2% (615)	16.8% (124)
The workshop practical periods are respected in my school	36.7% (271)	35.9% (265)	13.3% (99)	14.1% (104)	72.6% (536)	27.4% (203)
The technical workshop facilities in my school are obsolete and are in a state of breakdown pending repairs*	43.7% (323)	34.2% (253)	10.0% (74)	12.1% (89)	77.9% (576)	22.1% (163)
The practices materials are equitably distributed to every students during practical in the workshop	39.5% (292)	33.3% (246)	12.3% (91)	14.9% (110)	72.8% (538)	27.2% (201)
Practical are organized in such a way that they provide adequate training necessary for the acquisition of skills	32.9% (243)	34.5% (255)	17.7% (131)	14.9% (110)	67.4% (498)	32.6% (241)
Every student in my class has equal opportunity to attend practical in the technical workshop	34.0% (251)	39.0% (288)	14.9% (110)	12.1% (90)	73.0% (539)	27.0% (200)
The practical materials are equitably distributed to every student during practical in the workshops.	26.0% (192)	34.2% (253)	17.9%(132)	21.9%(162)	60.2% (445)	39.8% (294)
The technical workshops that are available in my school do take care of all trades and they are not different from those in other schools	11.2% (83)	22.9% (169)	28.9% (214)	36.9% (273)	34.1% (252)	65.9% (487)
If practical workshops are upgraded, it will enhance students' performance in public examination at all levels*	62.5% (462)	24.2% (179)	4.9% (36)	8.4% (62)	86.7% (641)	13.3% (98)
Multiple response					Positive view	Negative view
	27.5%(1625)	29.3% (1735)	19.7% (1165)	23.5% (1387)	43.2% (2552)	56.8% (3360)

In aggregate, findings show that while 43.2% of the students are satisfied with the state of their workshops, a significant proportion 56.8% of them are not.

To be specific, findings show while 52.6% (389) of the students strongly agreed and agreed that all the trades in the technical workshop in their school are adequately equipped, 47.4% (350) of them disagreed. Findings also show that while 34.1% (252) of the students strongly agreed and agreed that the technical workshops that are available in their school do take care of all trades and they are not different from those in other schools, a majority of the students 65.9% (487) of them disagreed. Findings also show that a majority of the students 77.9% (576) strongly agreed and agreed that the technical workshop facilities in their school are obsolete and are in a state of breakdown pending repairs while 27.4% (203) of them disagreed.

With respect to period for workshop practical, findings show that a majority of the students 72.6% (536) strongly agreed and agreed that the workshop practical periods are respected in their school while 16.8% (124) of them disagreed. A majority of the students 72.8% (538) strongly agreed and agreed that practical materials are equitably distributed to every student during practical in the workshop. Also while findings show that 67.4% (498) of the students strongly agreed and agreed that practical are organized in such a way that provide adequate training necessary for the acquisition of skills, 32.6% (241) of them disagreed. Finally, is worthy to note that while a significant proportion of the students are satisfied with the state of practical workshops in their school, a strong majority of the students 86.7% (641) strongly agreed and agreed if practical workshops are upgraded, it will enhance students' performance in public examination at all levels while 13.3% (98) of them disagreed.

Summary Descriptive Statistics on Students' Perceptions on Curriculum for Anglophone Technical Secondary Schools and Academic Performance

Based on the analysis, respondents posed different perceptions on the constructs on workshops for Anglophone technical secondary schools and academic performance. Table 37 presents the summary descriptive statistics relating to students perceptions on constructs related to workshops for Anglophone technical secondary schools and academic performance. Based

on this the overall assessment was based on the means and standard deviation scores reveal that out of the 10 constructs captured in this section, 3 were found to be of a positive perception while 7 had a negative perception (Table 37).

Table 12: Summary Descriptive Statistics on Students' Perceptions on Workshops for Anglophone Technical Secondary Schools and Academic Performance

S/N	Constructs	N	Mean	Std. Dev	Rank	Decision
1	All the trades in the technical workshop in my school are adequately equipped	739	3.05	1.044	8 th	Negative
2	Anglophones students' performance in public examination would have been better if the technical workshop facilities were to be upgrade	739	3.33	1.043	10 th	Negative
3	The workshop practical periods are respected in my school	739	2.45	1.021	3 rd	Positive
4	The technical workshop facilities in my school are obsolete and are in a state of breakdown pending repairs	739	2.76	1.142	7 th	Negative
5	The practices materials are equitably distributed to every students during practical in the workshop	739	2.19	1.089	2 nd	Positive
6	Practical are organized in such a way that they provide adequate training necessary for the acquisition of skills	739	2.61	1.026	4 th	Negative
7	Every students in my class has equal opportunity to attend practical in the technical workshop	739	2.29	1.068	1 st	Positive
8	The practical materials are equitably distributed to every student during practical in the workshops.	739	2.74	1.052	6 th	Negative
9	The technical workshops that are available in my school do take care of all trades and they are not different from those in other schools	739	2.74	1.006	5 th	Negative
10	If practical are upgraded, it will enhance students performance in public examination at all levels	739	3.32	1.052	9 th	Negative
¹Overall Mean for Decision=2.5						

¹A construct with a mean score of less than 2.5 indicates overall tendency towards indicates a tendency towards overall positive perception (Agreement) while a construct with a mean score of 2.5 and above indicates an overall negative perception (Disagreement)

With regards to the positive perceived constructs, students most significantly agreed firstly every student in their class has equal opportunity to attend practical in the technical workshop. This was so as seen by the mean score of 2.29 and a standard deviation score of 1.068 as shown on Table 37. Furthermore, they seconded that the practical materials are equitably distributed to every students during practical in the workshop (given a mean score of 2.19 and a SD of 1.089) as shown in Table 37. Besides the above expressions, students were of the positive view that the workshop practical periods are respected in my school (given a mean score of 2.45 and a standard deviation of 1.021). This constitutes the main positively perceived constructs in relation to students' perceptions on workshops for Anglophone technical secondary schools and academic performance.

On the other hand given their higher mean scores of above 2.5 and standard deviation scores, the following constructs posed to students in relation to students' perceptions on workshops for Anglophone technical secondary schools and academic performance were thus found to be of a general negative perception.

They disagree generally on the construct that practical are organized in such a way that they provide adequate training necessary for the acquisition of skills. This therefore reveals low effectiveness in the way Practical sessions are organized in the schools (Mean of 2.61 and standard deviation of 1.026; rank=4th).

Furthermore, they were of a general disagreement on the construct that the technical workshops that are available in their schools do take care of all trades and that they are not different from those in other schools. Also, this reveal low effectiveness on the way technical workshops relate to trade in their schools with respect to those of others (Mean=2.74; SD=1.006; rank=5th).

Also, students reveal an overall disagreement on the construct that the practical materials are equitably distributed to every student during practical in the workshops. It can therefore be deduced that there is low effectiveness in the distribution of practical materials (Mean=2.74; SD=1.052; rank=6th).

Also, they were of disagreement that the technical workshop facilities in their schools are obsolete and are in a state of breakdown pending repairs. Thus, indicating an overall poor state of technical workshop facilities within schools as revealed by the mean score of 2.76 and a standard deviation of 1.142. This was ranked as the 7th construct mostly perceived by students as shown in Table 37.

Similarly, students were of overall negative perception as they disagree on the construct that all the trades in the technical workshop in their school are adequately equipped (Mean=3.05; SD=1.044; rank=8th).

It was of a similar negative perception from students on the construct that If practical are upgraded, it will enhance students performance in public examination at all levels (Mean=3.32; SD=1.052; rank=9th). Thus, this may reveal the fact that other possible problems are in place that affects performance besides the upgrading of practical sessions in schools as indicated by the students. Lastly, they were of a negative perception on the construct that Anglophones students performance in public examination would have been better if the technical workshop facilities were to be upgrade (Mean=3.33; SD=1.043). It was on this item that students recorded a very high negative perception and as such was ranked as the 10th to the other constructs as shown in Table 37.

Teachers' Perspectives

In this section, we present the results on teachers' perceptions on workshops for Anglophone technical secondary schools and academic performance. These are presented in Table 38.

Table 13: Teachers' Perceptions on Workshops for Anglophone Technical Secondary Schools (n=260)

Statements	Stretch				Collapse	
	SA	A	D	SD	SA&A	SD&D
The technical workshops in my school meets the demanded number for all trade	10.8% (28)	9.2% (24)	46.2% (120)	33.8% (88)	20.0% (52)	80.0% (208)
The machines in the technical workshops are modern and easily manipulated to help students acquire technical skills	0.0% (0)	10.8% (28)	41.5% (108)	50.8% (132)	10.8% (28)	89.2% (232)
Each students is given adequate time to practice and innovate what they have learned in technical workshop	0.0% (0)	29.2% (76)	18.5% (48)	50.8% (132)	29.2% (76)	70.8% (184)
The period for practical are comfortable for the various trades in my school and the technical workshop space are sizable enough to accommodate all my students	10.8% (28)	18.5% (48)	41.5% (108)	27.7% (72)	29.2% (76)	70.8% (184)
The material for practical are always available in the acquired time	0.0% (0)	20.0% (52)	32.3% (84)	50.8% (132)	20.0% (52)	80.0% (208)
The heads of department always supervises the technical workshop activities weekly to channel difficulties to the principal	0.0% (0)	56.9% (148)	36.9% (96)	6.2% (16)	56.9% (148)	43.1% (112)
Teacher demand for materials needed for practical are always available to meet the student's need	10.8% (28)	18.5% (48)	46.2% (120)	24.6% (64)	29.2% (76)	70.8% (184)
Machines in technical workshops are out-dated and unmanageable*	20.0% (52)	32.2% (84)	27.7% (72)	20.0% (52)	52.3% (136)	47.7% (124)
Practicals coefficient for trade subjects is comfortable and all the students (rural and urban centres) are comfortable during practicals examinations	0.0% (0)	24.6% (64)	50.8% (132)	24.6% (64)	24.6% (64)	75.4% (196)
If the time provided for practicals examinations for students for CAP, Probatoire and BAC is sufficient, performance in practicals will be better thus, results to better performance in public examinations	10.8% (28)	46.2% (120)	32.3% (84)	10.8% (28)	56.9% (148)	43.1% (112)
Multiple response					Positive view	Negative view
	5.8% (136)	24.1% (560)	38.5% (900)	31.8% (744)	29.9% (696)	70.1% (1644)

*MRS reversed conceptual polarization.

In aggregate, findings show that a majority of the teachers 70.1% were dissatisfied with the state of practical workshops. To be specific, a majority of the teachers 80.0% (208) strongly disagreed and disagreed that the technical workshops in their school meets the demanded number for all trade. Findings also show that a majority of the teachers 89.2% (232) strongly disagreed and disagreed that the machines in technical workshops are modern and easily manipulated to help students acquire technical skills. Furthermore, a majority of the teachers of equal proportion 70.8% (184) strongly disagreed and disagreed that each student is given adequate time to practice and innovate what they have learned in technical workshop, the period for practical are comfortable for the various trades in their school and the technical workshop space are sizable enough to accommodate all students and that teacher demand for materials needed for practical are always available to meet the student's need.

A majority of the students 80.0% (208) equally indicated that material for practical are always available in the acquired time. Findings also show that a majority of the teachers 75.4% (196) disagreed that practicals coefficient for trade subjects is comfortable and all the students (rural and urban centres) are comfortable during practicals examinations. With regard to supervision of practical workshops, while findings show that 56.9% (148) of the teachers agreed that the heads of department always supervises the technical workshop activities weekly to channel difficulties to the principal, a significant proportion 43.1% (112) of the teachers disagreed.

Finally, is worthy to note that while a majority of the teachers are not satisfied with the state of practical workshops in their school, a majority of them 56.9% (148) strongly agreed and agreed that if the time provided for practicals examinations for

students for CAP, Probatoire and BAC is sufficient, performance in practicals will be better thus, results to better performance in public examinations while 43.1% (112) of them disagreed.

Summary Descriptive Statistics on Teachers' Perceptions on Workshops for Anglophone Technical Secondary Schools and Academic Performance

In this section we present summary descriptive statistics on Teachers' perceptions on workshops for Anglophone technical secondary schools and academic performance, it was therefore necessary to assess teachers' overall opinions to ascertain whether they were of a positive or negative perceptions. That is, we sought to identify the constructs positively perceived and those negatively perceived and their overall ranks in order of most significance. Based on the analysis, respondents posed different perceptions on the constructs on teachers' perceptions on workshops for Anglophone technical secondary schools and academic performance. Table 13 presents the Summary descriptive statistics on Teachers' perceptions on workshops for Anglophone technical secondary schools and academic Performance. Based on this, the overall assessment was based on the means and standard deviation scores. Out of the 10 constructs that make up this section, 8 were found to be of a positive perception (that is, recording an overall 80% positive agreement to the stated constructs related to Teachers' perceptions on workshops for Anglophone technical secondary schools and academic performance) while 2 were of a neutral as shown in Table 13.

Table 14: Summary Descriptive Statistics on Teachers' Perceptions on Workshops for Anglophone Technical Secondary Schools and Academic Performance

SN	Constructs	N	Mean	Std. Dev	Rank	Decision
1	The technical workshops in my school meets the demanded number for all trade	260	1.89	.809	4 th	Positive
2	The machines in the technical workshops are modern and easily manipulated to help students acquire technical skills	260	1.79	.787	3 rd	Positive
3	Each students is given adequate time to practice and innovate what they have learned in technical workshop	260	1.67	.840	1 st	Positive
4	The period for practical are comfortable for the various trades in my school and the technical workshop space are sizable enough to accommodate all my students	260	2.05	.848	6 th	Positive
5	The material for practical are always available in the acquired time	260	1.68	.749	2 nd	Positive
6	The heads of department always supervises the technical workshop activities weekly to channel difficulties to the principal	260	2.50	.607	9 th	Neutral
7	Teacher demand for material needed for practical are always available to meet the student's need	260	2.05	.826	6 th	Positive
8	Machines in technical workshops are outdated and unmanageable	260	2.47	1.020	8 th	Positive
9	Practical coefficient for trade subjects is comfortable and all the students (rural and urban centers) are comfortable during practical examinations	260	1.95	.686	5 th	Positive
10	The time provided for practical examinations for students for CAP, Probatoire and BAC is sufficient and better performance in practicals can enhance better results in public examination	260	2.50	.761	10 th	Neutral
Valid N (listwise) 260; Overall mean for decision making=2.5						

¹A construct with a mean score of less than 2.5 indicates overall tendency towards indicates a tendency towards overall positive perception (Agreement) while a construct with a mean score of 2.5 and above indicates an overall negative perception (Disagreement)

Based on Table 39, we present the constructs which were of a positive perception. However, they vary by degree of significance (ranked) with others of very high level of agreement than others. Based on this the items are ranked in order of significance or agreement.

Based on the analysis on Teachers' perceptions on workshops for Anglophone technical secondary schools and academic performance, the overall assessment of these views was based on weighted means. Results reveal the following about Teachers' positive perceived constructs on workshops for Anglophone technical secondary schools and academic performance.

Firstly, given a mean score of 1.67 and a standard deviation score of 0.840, teachers were of a positive opinion that each students is given adequate time to practice and innovate what they have learned in technical workshop as sown on Table 39.

Analysis further reveals that respondents were of overall positive agreement that that the materials for practical are always available in the acquired time (base on the mean score of 1.68 and a Standard deviation score of 0.749). This was ranked as the second most significant positive construct due to the low variability in teachers' perceptions as shown in Table 39.

Also, it was revealed that students were of an overall positive agreement that the machines in the technical workshops are modern and easily manipulated to help students acquire technical skills. This is true as indicated by a mean score of 1.74 and a

low variability in students' opinions related to the construct as given a standard deviation score of 0.787 as shown in Table 39. This was ranked as the third most perceived construct.

In addition, given the low variability in teachers' opinions as defined by a standard deviation of 0.809 and a mean score of 1.89, it was registered positively by teachers that the technical workshops in my school meets the demanded number for all trade. This was ranked as the fourth most significant construct as shown in Table 39.

Furthermore, teachers were of a positive perception that practical coefficient for trade subjects is comfortable and all the students (rural and urban centers) are comfortable during practical examinations (Mean=1.95; SD=0.686). This was the fifth most significant positively perceived construct in relation to teachers' perceptions on workshops for Anglophone technical secondary schools and academic performance.

The sixth ranked construct reveal that teachers were of a positive agreement that teacher demand for material needed for practical are always available to meet the student's need. This was confirmed given the mean score of 2.05 and a standard deviation score of 0.826 indicating low variability in their views on the construct as shown in Table 39.

Similarly, teachers were of a positive perception on that the period for practical are comfortable for the various trades in my school and the technical workshop space are sizable enough to accommodate all their students (Mean=2.05; SD=0.848). This was similarly ranked as the 6th construct (there were tied ranks) in relation to teachers' perceptions on workshops for Anglophone technical secondary schools and academic performance.

Furthermore, they were of a positive perception that machines in technical workshops are outdated and unmanageable. This was so given a mean score of 2.47 and a standard deviation score of 1.020. This was ranked as the 8th most significant positive perceived construct.

On the other hand they also were of a neutral opinion given a mean score of 2.50, that is, they were neither of a positive or negative perception on whether the heads of department always supervises the technical workshop activities weekly to channel difficulties to the principal. This was confirmed by a low variability in their views given a standard deviation score of 0.607 as shown in Table 39. This was ranked as the 9th most significant construct. Also, teachers were of similarly neutral perception on the construct that the time provided for practical examinations for students for CAP, Probatoire and BAC is sufficient and better performance in practicals can enhance better results in public examination given a mean score of 2.50 and a standard deviation of 0.761 as shown in Table 39.

Pedagogic Inspectors' Perspectives

Here we present the results on Pedagogic inspectors' perceptions on workshops for Anglophone technical secondary schools and academic performance. These are presented in Table 40.

Table 15: Pedagogic Inspectors' Perception on Workshops for Technical Secondary Schools (N=18)

Statements	Stretched				Collapsed	
	SA	A	D	SD	SA&A	SD&D
The technical workshops in my school meet the demanded number for all the trades.	0.0% (0)	0.0% (0)	27.8% (5)	72.2% (13)	0.0% (0)	100.0% (18)
The machines in the technical workshops are modern and easily manipulated to help students acquired technical skills.	5.6% (1)	0.0% (0)	33.3% (6)	61.1% (11)	5.6% (1)	94.4% (17)
We assure each student is given adequate time to practice and innovate what they have learned in technical workshops.	33.3% (6)	16.7% (3)	27.8% (5)	22.2% (4)	50.0% (9)	50.0% (9)
The periods for practicals are comfortable for the various trades in my school and the technical workshops space are sizable enough to accommodate all my students.	5.6% (1)	22.2% (4)	22.2% (4)	50.0% (9)	27.8% (5)	72.2% (13)
The materials for practicals are always available in the required quantity and on time.	5.6% (1)	0.0% (0)	44.4% (8)	50.0% (9)	5.6% (1)	94.4% (17)
The heads of department always supervise the technical workshop activities weekly to channel difficulties to the principal.	5.6% (1)	27.8% (5)	38.9% (7)	27.8% (5)	33.3% (6)	66.7% (12)
Teacher demand for material needed for practicals are always available to meet the students' needs.	5.6% (1)	0.0% (0)	66.7% (12)	27.8% (5)	5.6% (1)	94.4% (17)
Machines in technical workshops are outdated and unmanageable.	38.9% (7)	22.2% (4)	27.8% (5)	11.1% (2)	61.1% (11)	38.9% (7)
Practicals coefficient for trade subjects is comfortable and all the students (rural and urban centers) are comfortable during practicals examinations.	22.2% (4)	27.8% (5)	16.7% (3)	33.3% (6)	50.0% (9)	50.0% (9)

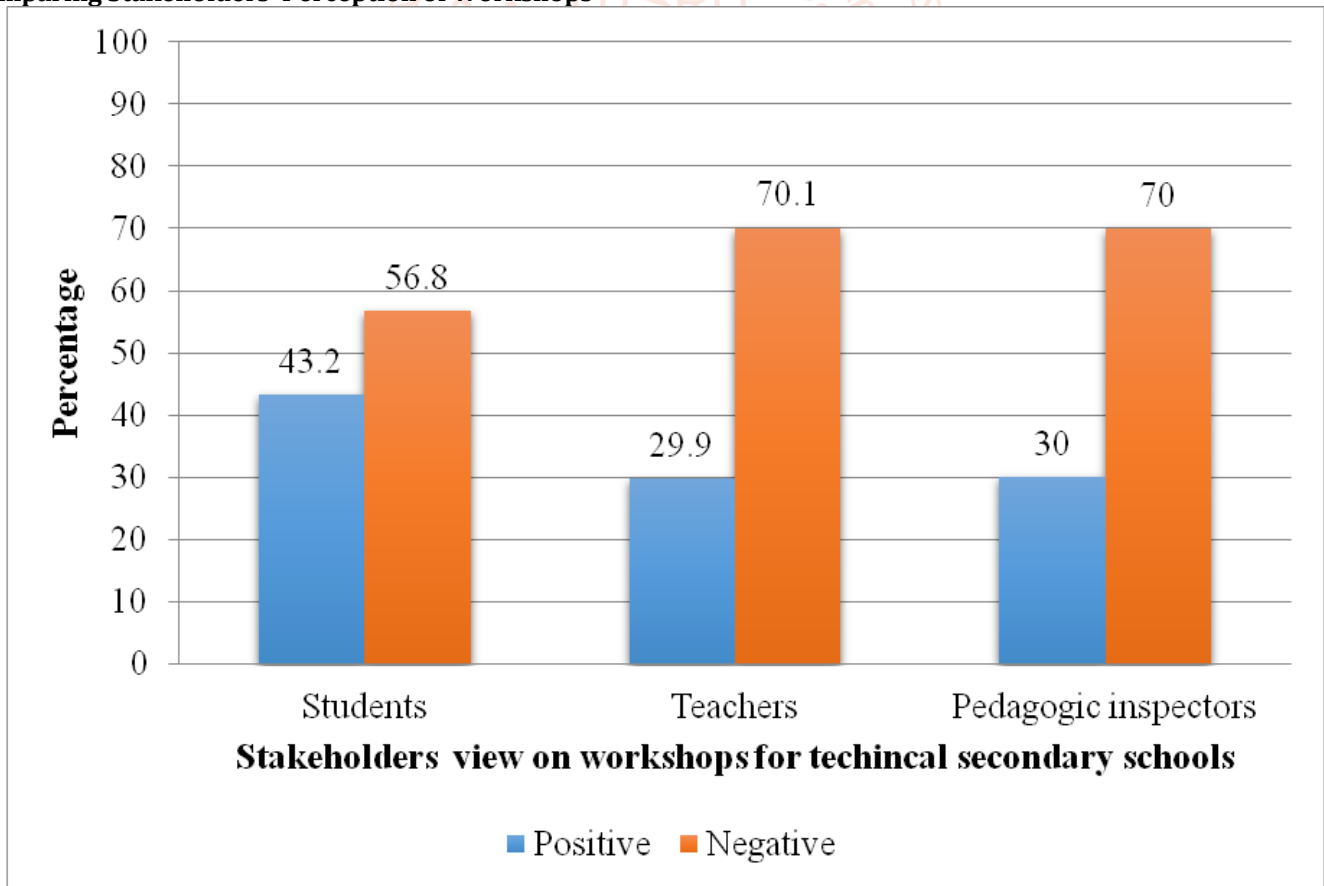
If the time provided for practicals examination for students for CAP, Probatoire and BAC is sufficient and better performance in practicals can enhance better results in public examinations.	27.8% (5)	33.3% (6)	27.8% (5)	11.1% (2)	61.1% (11)	38.9% (7)
Multiple response					Positive view	Negative view
	15.0% (27)	15.0% (27)	33.3% (60)	36.6% (66)	30.0% (54)	70.0% (126)

In aggregate, findings show a majority of the pedagogic inspectors 70.0% had a negative view about workshops and practical in Anglophone technical secondary schools. To be specific, findings show that all the pedagogic inspectors 100% (18) disagreed that technical workshops in schools meet the demanded number for all the trades. Also, a majority of the pedagogic inspectors 94.4% (17) disagreed that machines in the technical workshops are modern and are easily manipulated to help students acquired technical skills. A majority of the pedagogic inspectors 72.2% (13) also indicated that period allocated for practicals are inadequate and that not every students is given adequate time to practice what they have learned as indicated by 50.0% (9) of them.

Findings also show that a majority of the pedagogic inspectors 94.4% (17) disagreed that materials for practicals are always available in the required quantity and on time and meet the demands of teachers. Also, 61.1% (11) of the pedagogic inspectors agreed that machines in technical workshops are outdated and unmanageable. A significant proportion of the pedagogic inspectors 50.0% (9) were comfortable with the coefficient allocated for trade. A majority of the inspectors 66.7 (12) also disagreed that head of department always supervise the technical workshop activities weekly to channel difficulties to the principal.

Finally, findings show that a majority of the pedagogic inspectors 61.1% (11) agreed that time provided for practicals examination for students for CAP, Probatoire and BAC is sufficient and better performance in practicals can enhance better results in public examinations.

Comparing Stakeholders’ Perception of Workshops

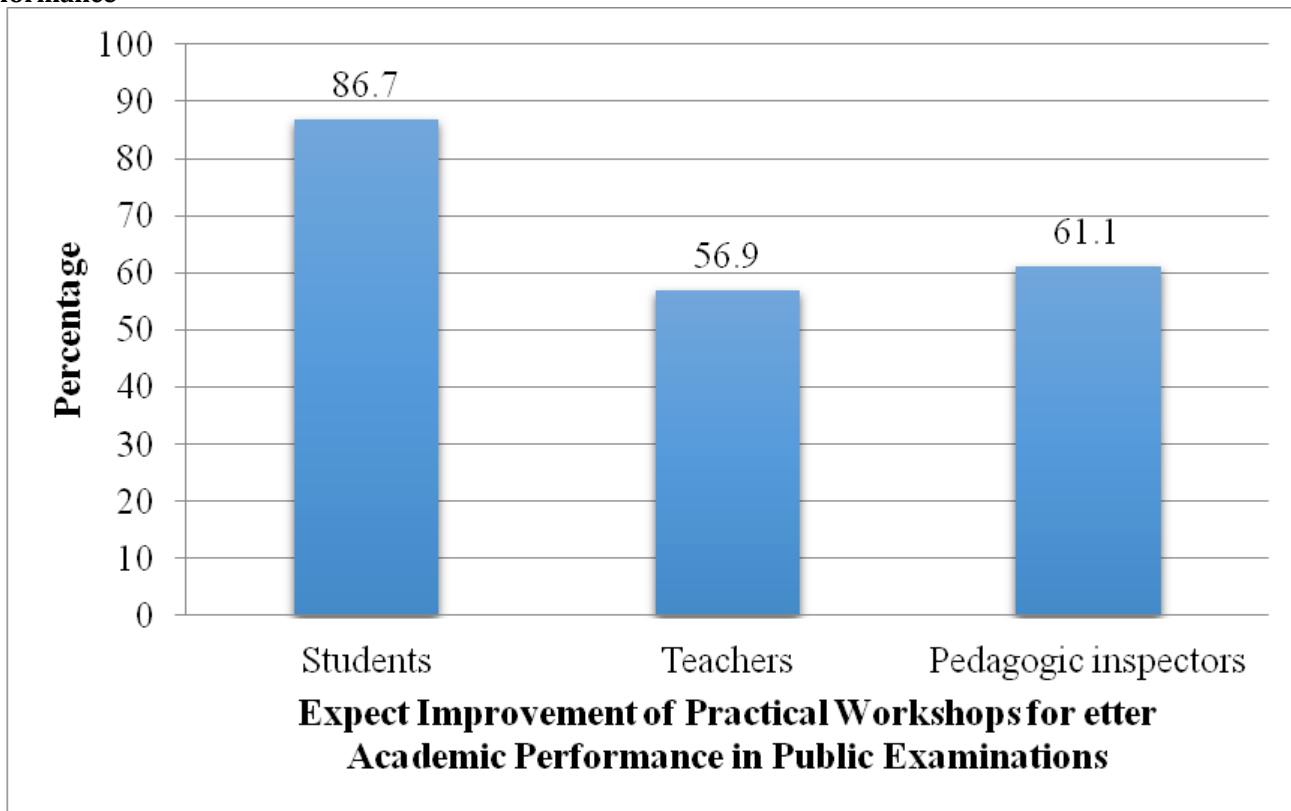


χ^2 -test: $\chi^2=2.17$; $df=2$; $P=0.338$

Figure 4: Perceptions of Anglophone technical secondary stakeholders on workshops and practicals

From figure 8, all three stakeholders in their majority were not satisfied with the state of practical workshops for Anglophone technical secondary schools. For instance, teachers and pedagogic inspectors making a proportion of 70.1% and 70.0% respectively were the most dissatisfied and lastly students with a proportion of 56.8%. However, chi square results (χ^2 -test: $\chi^2=2.17$; $df=2$; $P=0.338$) show overall no significant difference in stakeholders' views on their perceptions of Anglophone technical secondary stakeholders on workshops and practicals.

Expectations of Anglophone Technical Secondary Stakeholders on Workshops and Practicals and Academic Performance



χ^2 -test: $\chi^2=13.36$; $df=2$; $P=0.001$

Figure 5: Comparison of Expectations of Anglophone Technical Secondary Stakeholders on Workshops and Practicals and Academic Performance

Findings figure 9 show that a majority of the three stakeholders’ students 86.7%, teachers 56.9% and pedagogic inspectors 61.1% expect improvement of workshops and practical for better academic performance of students in public examinations. However, chi square results (χ^2 -test: $\chi^2=13.36$; $df=2$; $P=0.001$) show overall statistically significant difference in stakeholders’ views on the expectations of Anglophone technical secondary stakeholders on workshops and practicals and academic performance.

Results on Test of Hypothesis

In this section we verify the stated hypothesis one for the study. The hypothesis states that:

H_{a2} : There is a significant relationship between Anglophone secondary school technical education workshops and students’ academic performance in public examinations.

H_{o2} : There is no significant relationship between Anglophone secondary school technical education workshops and students’ academic performance in public examinations.

Table 16: Correlation Between Anglophone Secondary School Technical Education Workshops and Students’ Academic Performance in Public Examinations.

	Test statistics	Workshop and Academic performance
Spearman's rho	R-value	.568*
	p-value	.003
	N	739

At chosen level of significance (0.05), the null hypothesis was rejected. Thus as shown in Table 41, results reveal a positive statistically significant correlation between between Anglophone secondary school technical education workshops and students’ academic performance in public examinations ($r=0.568$; P -value= 0.003). This entails that as the nature of the technical education workshops becomes effective, so too does students’ academic performance in Public examinations increase. Thus, there is a significant relationship between Anglophone secondary school technical education workshops and students’ academic performance in public examinations.

Generally, findings in the study show that a majority of the students, teachers and pedagogic inspectors were not satisfied with the state of workshops and practicals in Anglophone technical secondary schools. In other words, findings show workshops in Anglophone technical secondary schools are not well equipped. Based on this, findings also show that a majority of the three stakeholders; students, teachers and pedagogic inspectors expect improvement of workshops and practical for better academic performance of students in public examinations.

This is therefore a clear indication that that workshops and practicals in technical secondary schools has a significant influence on students' academic performance in public examinations. Despite this perceived importance of workshop facilities to technical secondary schools, findings show that in some technical schools, there is completely no equipment, tools, working materials, etc. Findings also show that in some schools, where a workshop is even available, the equipment, machine and other tools available are largely obsolete and unmanageable by teachers and students.

The findings of this study tied with that of Pauline who in (2009) conducted a study that examines "the effects of workshop facilities on the acquisitions of technical skills: Case Study of Public Technical High Schools in North West and South West Regions of Cameroon with findings revealed that, there is inadequate availability of workshop facilities in Public Technical High Schools and this was found to adversely influence the acquisition of Technical skills by students. Similarly, in another study carried out by Dasman (2011) in two Municipalities in Ghana, findings also show that there is generally inadequacy in the provision of instructional materials which leads to focusing more on theoretical teaching leading to trainees lacking proficiency in their chosen of specialization.

Similarly, due to the inadequate workshop facilities in majority of our technical secondary schools in the Anglophone regions and with some schools not even having these workshops facilities, there is bound to a lot of theoretical teaching which ends up leaving many students not acquiring the necessary skills. It should be noted that lack of adequate workshop facilities negatively affects academic performance in public examinations.

According to Fitts and Posner's Three-Stage Theory of Motor Skills Acquisition, learning occurs in three stages; the Cognitive, Associative and Autonomous. In the cognitive stage, the learner intellectualizes the task, performance is erratic, and the procedure is carried out in distinct steps with practice and feedback, the learners reaches the integrative or associative stage, in which knowledge is translated into appropriate motor behaviour which gradually results in smooth performance (Reznick & Mac Rae, 2006). From the perspective of this theory, good academic performance which is the end results in every training cannot be realised when there is inadequate facilities, equipment and working tools to enable our technical secondary schools in the Anglophone regions of Cameroon to gain skills for effective performance.

Consequently, the lack of well equipped workshops in the Anglophone technical secondary schools will continue to negatively affect the academic performance of students thus, preventing their smooth transition from school into the job market for lack of skills. The National Workshop Association (1997) holds that a workshop is a flexible environment, in which coaching different kind of activities, works and learning takes place. According to them, workshop supports participants' personal growth, social employment, active participation, employability and work skills through communal coaching with an emphasis on practical work. Therefore, in a context like ours where findings has shown that technical workshops Anglophone technical schools does

not meet the demanded number for all the trades, machine available are obsolete, practical time is inadequate due to lack of workshop facilities, students will hardly acquire necessary skills. Hence, there is bound to be much of theoretical training offered to students than practical training as it is the case in many of our technical secondary schools in the Anglophone regions of Cameroon.

Conclusion and implication of findings

In conclusion, findings have shown that and workshop are found to have a significant influence on students' academic performance in public examinations. In as much as this aspect have been found to have a significant influence on students' academic performance in public examinations as stated by teachers, students and pedagogic inspectors, findings further revealed that a significant proportion of students, teachers and pedagogic inspectors have expressed dissatisfaction particular with workshops in English speaking technical secondary schools. As a result of this, a majority of the students, teachers and pedagogic inspectors are expecting improvement in curriculum, workshop facilities and teachers' quality for effective performance of students in public examinations.

It should be noted that Anglophone technical education is faced with a plethora of problems. Therefore, if these problems are not adequately addressed such as putting in place a well-designed curriculum, adopting and effectively implementing strategies for improving teachers' quality and workshop facilities, the academic performance of students in public examinations will not only be low, but many students will graduate from schools while seriously lacking in skills for their effective integration into the labour market.

According to the Human capital theory of Becker and Schultz (1960), education is an instrument for national growth and human capital formation. Improvement in teachers' quality with poor curriculum in place and lack of adequate workshop facilities will not yield the expected results. Therefore, a comprehensive approach must be used in resolving the plethora of problems facing technical education in Cameroon, particularly, technical schools in the Anglophone regions of the country.

Recommendations

The following are recommended for a successful and fulfilment of the objectives of technical education and academic performance of Anglophone Secondary School students' in public Examinations.

The recommendations made in this study are addressed to the state as policy makers and resource providers, to curriculum experts and teachers as curriculum content providers and implementers, to employers as consumers of school products, to the school administrators as managers of curriculum, to learners as immediate beneficiaries and other stakeholders like parents and the community.

To the State and Policy Makers

To the state, it will be advantageous for educational expenditure to be match with educational outcomes in that Anglophone secondary school students of Technical Education acquire certification in public examinations like CAP, Probatoire and BACC.

Although it is very expensive to set up and furnish a technical workshop in Technical Secondary schools with the necessary infrastructure, equipment, finances and tools, the State should invest more in this sector if Cameroon has to emerge in 2035 so as to rely on their own technocrats and spend less money on foreign experts. Schools should be concentrated in areas with well-furnished, adequate and relevant human, material, financial and time resources. The rural schools should be equipped with preliminary working materials especially in their workshop. Local materials should be encouraged.

Even though the priority of Technical Education is the acquisition of skills, it must be backed with evaluation and the acquisition of certification in public examinations.

The curriculum should be readdressed so as to eliminate grammar school subjects from Technical education as indicated by all the stakeholders of technical education

An advisory board should be created at the local levels to give feedback to the State policy makers and curriculum expert on the real need of the society so that there can be innovations.

A critical look at the policy gives the education philosophical orientation of Cameroon towards essentialism which would not match theoretical approaches of social cognitivism and social constructivism which currently dominate pedagogy worldwide.

It is therefore imperative for Cameroon education policy makers to redefine educational philosophies towards constructivism and Fitts and Posner who hold that the learner explores his environments to bring out new things.

Adequate funding should be provided by the State. The budgetary allocations for vocational and technical schools should be by far more than that allocated to a general education secondary schools considering the expensive nature of their training and infrastructures are very very expensive

Scholarships should be given to students to be trained in specialized areas within and abroad. The government should continue the exchange program of technical education teachers to China, Korea and Japan where technical education is well advanced

The government on its part should do well to equip the already created schools so as to meet up with the training of the needed human capital.

Teachers should be given the necessary attention and motivation so that they will be efficient and effective. Principals, heads of departments and delegates of education should channel appropriate information about each teacher either for promotion, in-service training or motivation so as to encourage effective instructional duties and thereby good professional output. There should also be an avenue for all the stakeholders of education to concert.

School administration is a distinct professional practice within the school system. It is a distinct professional practice from teaching though they are cognate professions which share some complementarities.

Continuous professional development should be encouraged for teachers in the field and increase the number of seminars.

The government should adopt and strictly implement a clear-cut career profile to become a school principal/director based on work experience, longevity of service, job consciousness, academic and professional

To the Curriculum Developers and Instructional Designers

All stakeholders must be taken into account when designing, implementing and evaluating the curriculum and so that of technical education should follow the above example

The results of these findings demonstrate an urgent need for the modification of the program of technical education in Cameroon in general and Anglophone Cameroon in particular.

Training based on competency based curriculum, ensures that the person would possess both knowledge and skills of defined standard corresponding to relevant workplace requirements and reflect the realities of the workplace. These qualities must be backed with performance in examinations that are standard.

Curriculum should be designed such that more subject matter should be based on practical rather than theory.

To Teachers

They must master instructional strategies for competency development.

Teachers should be true to themselves and assess their own skills and competencies before assessing the students. Teachers should use part of their periods of holidays to update and go for rehearsal courses to be acquainted to changes.

To the School Administrators

School principals should also be more open to the external community by considering them as an important stakeholder in the school who should partake directly in most school affairs such as open days, school committees and parents conferences and even provide an avenue for internship for technical education in their various trades.

Principals are called upon to improve upon their human relationship skills as some principals consider the teachers and other service users of school as unimportant. This will ameliorate the school climate and in turn boost the morale of the main forces and the various interest groups in the school system. This will put forward a favourable working climate for all workers.

Funding allocated for practical in technical colleges must be executed judiciously.

Administrators should be hardworking, disciplined as they discharge their duties. They should be prudent and honest in the management of all resources under their control. This has to do with making the best use of the limited human, financial and material resources available. There must also be careful monitoring, supervision and evaluation of the programme as well as providing opportunities for staff training and retraining.

In addition to the normal school curriculum, extra curricula activities should be encouraging in schools.

To Learners

The students must be able to appreciate technical education positively so as to achieve at the end.

The school role through this policy is to teach the relevance of effective decision making and encourage learners to do so. Academic and Career choices should be made based on skills and interests and not on parents or peer influence.

Learners must realize that a time will come in life when they will have to take responsibility for their actions. This therefore means that the time will soon appear when they can no longer deceive their parents or their teachers. This calls for their total devotion and seriousness in their studies.

Self-esteem should be the portrayed by all students of technical schools so as to show to the society in which they live the worth of technical education so as to wipe away negative perception of it.

To Parents, and Others Who Influence Students' Decision Making

Students should be trained in specialties (trades) that will meet up with the need of the nation's economy such that companies and industries will have the required manpower needed for the realization of their task and be able to put food on their tables. Hence self employed

Parents should never at any time think that technical and vocational education is for those who are considered as academic misfit or those who are cognitively weak.

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