

# Assessing the Role played by Technical Universities in Sierra Leone.

## Case Study: Technical Institutions in Sierra Leone

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### ABSTRACT

There is necessity for skilled human resource development and practicality for the overall development of any country to improve. This cannot be over emphasized as Technical and vocational education is the one that produces harmonious, sustainable national development. Productivity of a nation is seriously influenced by this technical and vocational education and training of different courses in the polytechnics. It is though, certain that the polytechnic provides most of the skilled labour of the workforce which help the country to succeed and develop worldwide. It is still the belief and opinion of most people that there polytechnic institutions cannot be compared to universities. But now the leadership of the SLPP government thinks that these polytechnics can be transformed into universities as they have the capacities and facilities to run programmes that will lead to the country's development. They will be able to train skilled labour that is practically oriented to fill the gap of the middle level manpower in society for growth and development of the economy. This has ignited the essence to upgrade the Eastern polytechnic into a Technical University of the East, Sierra Leone. This article therefore examines the importance of a Technical University in a country and the role it will play in the growth and development of Sierra Leone.

### INTRODUCTION

Technical/Vocational education is an aspect of education which is a skill acquisition - oriented form of training, based on application of mathematics and scientific knowledge in specific field for self actualization and development. (Olaitan, 2006)

According to Sower (1971), technical/vocational education is a means towards industrialization of a Nation. He goes on to state that vocational/technical education is a social process, concerned primarily with people and their part in doing work that society needs alone which is concerned with preparing the people for indispensable work and improving the potential for labor force. Now, the world drifts to science and technology to fit into the society in the nearest future, requiring an knowledge of technical and vocational education

In the Sierra Leonean context, technical and vocational education is defined as that education provided in government approved educational institutions in which the aim shall be to develop self reliance and self-actualization in individual as well as the progressive development of society and economy of the country through technical and vocational training in all areas of urgent need especially the agricultural, industrial and commercial sector.

TVET programme in Sierra Leone presently suffers from management weakness and the quality of available information on TVET matters are compounded by the absence of a body responsible for the registration of institutions and trainees, development of curriculum as well as motoring and training standards. TVET planning and policy information should be strengthened and its education must be based on learning to known, to do, to live together and emphasis must be placed on learning to do. The TVET division at the Ministry of Education, Science and Technology (MEST) must be proactive.

For Sierra Leone to excel technologically there is need to assess the factor that influence the improvement of vocational education programmes in government owned institution. In spite of the importance of vocational education to the development of both the individual and society at large, there is no much emphasis placed on the factors that

improve vocational education programmes in Sierra Leone. The frequent occurrence of low student participation in vocational education courses has caused serious shortage in both low and middle level manpower in the society. Hence unemployment rate is high among youths in Sierra Leone. This is a great concern to all well meaning Sierra Leoneans, institutions, industries and Labor Ministry.

The use of modern technology practices require highly qualified staff. However, in Sierra Leone- as in many developing countries- there is a shortage of professionals and well-trained workers in the extractive industries. The lack of a skilled work force hampers the sectors economic development and companies therefore cannot exploit their full potential. Due to the skills gap, currently only 23% of middle level and 12% of senior level staff in the mining sector are Sierra Leone nationals. Hence, no notable middle class has emerged in the country so far.

Both the mining sector and the Government of Sierra Leone share an interest in a skilled work force and in the promotion of youth employment. However, this raises several challenges.

Polytechnics are institutes that teach applied Arts and Sciences rather than academic subjects. They are higher educational institutions responsible for training in vocational and technical subjects. In 1997 the Milton Margai college of Education and Technology was transformed into a polytechnic by the Government to run tertiary programmes that would provide the bulk of our men and women with technical education that is necessary and relevant in technology.

The Eastern polytechnic Kenema was also transformed and these institutions have undergone several transformation and challenge for the improvement of the middle level manpower in society. Undeniably, national growth, development and productivity is directly influenced by the technical and vocation education and training courses in the polytechnics (Mamuh, Gabiba and Budu 2007).

The government in 2018-2019 emphasized the Eastern Polytechnic had the capacity to be transformed into a University as it has much better facilities, trained staff/ personnel than some other private Universities in Sierra Leone accredited to run degree programmes. Though some of

these institutions provide the bulk of the skilled workforce which determines the economy and the country's ability to compete in the global economy, yet there is a perception of the public that these institutions are second in comparison to the Technical Universities. The value of the output and the credibility of these Universities are regarded by most people second rate mostly because there is no emphasizes on skills competencies in addition to the academic component expected in all tertiary institutions.

The polytechnic education consists of all formal education received after the completion of senior secondary school in institutions demanding entry qualifications not lower the number of General Certificate ordinary or the Advanced level or the WASSEC. The objective of technical and vocational education and training (TVET) is to fill the gap in technical and vocational manpower needs of Sierra Leone, to produce a more literate, numerate and enterprising lower middle level technical and vocational work force, to encourage women and girls to participate in national development through the acquisition of technical and vocational skills and aesthetic values in productive work (Sierra Leone Education Act 2004).

The principal objective of Technical education is to train youths and adults regarding them for the labor market. The objectives of this research is to bring out the major roles of Technical Universities of a country/ development of self-reliance and self-actualization in individuals as well as progressive development of the society and the economy of a country .

To alert people that technical education includes the preparation of graduates for occupations that are classed above skilled crafts but below the scientific or engineering profession.

#### Research Questions:

1. What is Technical University/Education?
2. What are some of the importance of Technical Education/Benefits?
3. Explain the Role of Technical University in a country?

The rationale for Technical University implementation is because development is rate of economic development is determined not only by its material resources and size of its

internal market but by its brainpower, this means that its success in developing and utilizing effectively the intellectual capabilities of its population. The wastage of these human resource capabilities whether through unemployment or failure to develop sufficiently the intellectual potential of individuals is a drag development as well a major social problem (Adjibolsoo, 1995).

It is the sole aim of the Government of Sierra Leone to ensure that human resource is developed and employed in such a manner as to secure the greatest possible contribution to national economic development of Sierra Leone.

### **Methodology**

The Eastern Polytechnic, Private Mail Bag, Kenema, was used as a case study to access Technical University Education in Sierra Leone. This study is based on the Roles, Importance/benefits and Technical University in a country.

In this study, a total 150 respondents were used which include 5 principals I call from the Polytechnic colleges, a total and 5 vice principals, 50 lecturers, 10 each from the Polytechnics, 5 vice principals from the polytechnics, 1 each and 40 students, 8 each from the Polytechnic colleges and 50 non-teaching staff 10 each from the Polytechnic, namely secretaries, administrative staffs and cleaners.

All these were randomly selected to give their views and opinions about the transformation from the Polytechnic to Technical University. The instrument uses were questionnaires, semi-structured interviews conducted for the respondents. The primary data collected was analyzed in relation to the research questions and interviews. The Data was analyzed qualitatively.

### **DISCUSSION OF FINDINGS**

In the knowledge society of the 21<sup>st</sup> century is dominated by information and communication technology, where labor market demands are constantly increasing and changing, which provide relevant Technical education programmes to both men and women as a fulfillment to the effort to foster sustainable development and attain the millennium development goal 1 which aims to eradicate poverty and hunger in Africa.[African Union , Second Decade of education for Africa,2006-2015, Draft Plan of Action, June 2006.

According to UNESCO and the International Labor Organization [ILO], Technical education refers to aspects of the educational process that involve general education, the study of technologies and related science, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life. [UNESCO and ILO, 2001. It also requires/lays emphasis on softer skills such as communication, negotiation and teamwork. Technical education is dispensed in public and private educational establishments or other forms of formal or informal instruction aimed at granting all segments of the society access to lifelong learning resources.

The vision of Technical education is attributable to the crisis that Africa-Sierra Leone has gone through and is still going through----such as financial crisis, changes in the production system of the labor market and the contributed factor to increasing graduate unemployment.

Technical education was unable to provide the skills required by businesses. The inadequate investments in Technical education contributed to its deterioration and reduced its effectiveness. Yet, the principal objective of Technical education is to train youths and adults alike, preparing them for the labor market.

With technical revolution and innovations in science and technology, labor market needs have significantly increased so new challenges must be met in order to match the education proposed with vocational demands. In this regard, several countries are in the process of reforming their education system, with a view to training youths to meet national, regional or international market needs of the country.

The so-called “intellectual” work is often associated with “manual” work. There is on one hand, white-collar (office) professions and, on the other, traders, technicians, etc. Nowadays, such a distinction is no longer possible, even though society continues to undervalue and minimize

technical education. Consequently, pupils facing difficulties in their studies are those usually sent to vocational streams.

## THE IMPORTANCE AND BENEFITS OF TECHNICAL EDUCATION

Technical education makes the students skilled and technically fit for the industries. The technical education schemes are having very good opportunities for career and employment. It imparts the knowledge strongly from the basics to advanced and modern technologies for the budding technical aspirants. It provides special practical knowledge of technologies and skills to students. It is different from general education as promotes independent and self learning, tunes the student effectively and increases the potential of the students.

Technical Education offers good opportunities for employments and it would be helpful to make successful career. It contributes a major share to the overall education system and plays an important role in the social and economic development of our nation.

In this era of unemployment, only technical education can assure one of a job or source of income in terms of technical skills and it can provide comfortable living. Those who are still in the conventional institutions, passing examination that have little relevance in the modern systems, may not find opportunities of employment. And, quite naturally, they end up becoming the victims of frustration and find themselves in dilemma in this modern world.

If a country owns sufficient technical hands and full of skills, it undoubtedly accelerates the pace of development. Technical hands cannot be unemployed. On the other hand, technical hands do not need to request others for jobs, if they start their own business; they can provide job opportunities to other educated people as well.

Technical University is an organized form of technical and vocational education.

Technical education should not be seen as only that acquired from the traditional colleges but seen as education obtainable from departmental schools, workshops, planned on-the-job training, seminars, industrial attachments and various part-time and technical courses. Such institutions can be government technical schools and institutions such as training School, the iron ore mines,

the Water Resources Institute, Engineering Training Centre and the polytechnic training colleges of the country.

The National Policy on Education (1995) spells out the importance of technical and vocational institutions for the improvement of the middle level man power in society.

1. To provide trained manpower in applied science, technology and commerce, particularly at sub-professional grades,
2. To provide the technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development,
3. To provide people who can apply scientific knowledge to the improvement and solution of environmental problems for the use and convenience of man,
4. Give an introduction to professional studies in engineering and other technologies,
5. Give training and impart the necessary skills leading to the production of craftsmen, Technicians and other skilled personnel who would be enterprising and self-reliant/self employed.
6. To help young men and women have an intelligent understanding of the increasing complexity of technology.
7. To demonstrate the conservative colonial mentality that technical education must continue to be prevocational and sub-professional in content. There is no aspect of human activities today that has no technical orientation and complexity. Even religious worshipping today demands high technology as seen in the modern designs and construction of churches and mosques.

The role of technical education graduates in designs/ skills, construction and operation of our industries, including oil, agriculture, forestry petro-chemical, mineral and water resources, electrical power generation and distribution, constructions, textile, iron and steel, automotive and plastics; as well as in health technology, environmental designs, armament and commercial enterprises. All these are evidences of the role of technical education in national development.

Development and civilization are two different things. This is because we look at a few physical structures and conclude that these are evidence of development, where as the percentage of persons who own such structures is very few.



If most citizens are not self-reliant the nation cannot be said to be developed. Self-reliance depends on the degree of gainful occupations with Self-employment, technical expertise and expert consultancy services available to the individuals, both in the public and private sectors.

This is because there are not commensurate incentives to attract and retain technical teachers. This is an overlooked serious impediment to national development. We talk of manpower development but often tend to forget that there must be manpower to create and develop the manpower.

The educational institution is the brood-house and the hatchery of culture and technology for national development. If the socio-economic status of the technical teacher does not compare favorably, with those of his counterparts who are in administration or business, then he cannot confidently make researches, invent and innovative ideas, or give the best of what he has to the learner. If the teacher is destitute, then knowledge is devoid and then development becomes delayed or destroyed.

According to Okafor (1984), if there is one strand of behavior discernible through the fabric of western progress and developmental policy it is the encouragement of and handsome remuneration of excellence, scholarship and concomitant creativity and invention which lacks in African Countries.

In many countries, according to Dyankov (1996), equality of access to technical and vocational education is translated into legal provision, but quite often - not applied in practice. Almost all Member States have legal provisions for the equal participation of women and girls into education and in employment.

However, he recommends that, many countries need special promotional measures to ensure the genuine equality of sexes.

To promote equal access of girls to technical and vocational education courses, more effective structure of educational and vocational guidance and counseling services in schools has been provided, along with the need to produce guidance and counseling

materials that are carefully and attractively designed to include a variety of information on new and non-traditional/men dominated areas.

Some countries have attempted to change the attitude of parents and society as a whole towards technical and vocational education through a variety of strategies like open houses, special promotional events, print and non-print media, open/PUBLIC sensitization aiming to keep parents informed about various occupational opportunities for girls in technical and vocational education.

The media assists this process by giving a positive emphasis on successful women in non-traditional occupations, promoting new role models for girls. In this respect, many of the countries' reports describe a wide variety of special measures that have been taken, aiming to attract more girls to technical and vocational education; to ensure successful completion of female students to technical and vocational training courses; to facilitate their job placement; and to assist women workers to adapt to new occupations.

In *Poland, Mexico, Bulgaria, Portugal, Thailand, Mauritius, Canada and Ukraine*, the training of girls as skilled workers for agriculture, light industry, general services, public utilities, trade and public catering, is being constantly expanded in technical and vocational institutions.

In *New Zealand*, women participate equally with men in technical and vocational education but social attitudes have resulted in some women being confined to a narrower range of technical and vocational education than men. Various corrective measures are taken, such as workshop sessions - introducing to trade and technical training; introduction courses for women; a public education programme 'Girls can do anything'; FAIR (the Female Apprentice Incentive for Recruitment), a first-year wage subsidy to employers for female apprentices in all trades, except hair-dressing.

In some countries, in conformity with certain traditions, technical and vocational education is regarded predominantly for boys only.

In *Benin*, a specific project is promoting the education of girls and providing educational guidance. In *Bahrain*, technical secondary schools are generally not accessible to girls; whereas in *Morocco*, in order to facilitate girls' attendance in technical and vocational institutions, those who live far away are offered separate dormitories for girls. In *Kuwait* women have no access to certain programmes, for example auto-mechanics, under the pretext that they do not correspond to women's nature or physical capabilities. Similarly, in *Bahrain, Greece, Cyprus, Jordan, Italy, Spain* and other countries, tradition of sex-biased technical education still exists

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## SUMMARY OF FINDINGS

1. The study revealed that to enhance effective implementation of technical and vocational education programs, s government should give full support to technical and vocational institutions.
2. That lack of teaching and learning materials, poor learning environment, poorly equipped workrooms and lack of standard building for technical and vocational training programs inhibit the implementation of technical and vocational education programs.
3. That there is no separate units that help improving technical and vocational education in the institution, such as career guidance and counseling units. It was revealed that technical and vocational institutions need this unit to improve their performance.
4. That many of the technical and vocational institution do not have standardized teaching syllabuses, but learning activities are 80% practical. Internal assessment is done during practical lessons.
5. That about 50% of technical and vocational institutions do not benefit from international co-operations' support to female students in technical and vocational institutions. Very few organizations that give direct support to female learners. They only support female learners through the technical and vocational institutions in the form of training materials and start-up-kits.

## CONCLUSION

The study assessed what technical/vocational institution is the importance and their roles in a country and the implementation of technical and vocational education programs in Kenema city. The result of the findings reveals that government's active involve can greatly enhance effective implementation of technical and vocational education programs, at the same time the provision of adequate learning materials, conducive learning environment, and proper or standard building for technical and vocational education and training can help in the effective implementation of technical and vocational education programs. The study also revealed that technical and vocational guidance and counseling units or other units from education ministry will help motivate learners in the institution. The study further revealed that most of technical and vocational training centers do not have harmonized training manual, only that they put premium on practical lessons so that learners can acquired the skills, and become self-reliance and employable. Findings of the study revealed that female students are not getting enough support from international co-operation to access technical and vocational education and training in technical and vocational institutions in Kenema City.

From the research it can be concluded with considerable optimism that technical education is if not the best but one important of all the educational processes given and acquired in school and out of school. It gives individuals the knowledge and the skill to be creative and practical efficiency and competence, to enable them contribute to the technological development of the nation. The contribution of an individual is very important in national development and the magnitude and his ability to contribution in national development is dependent on the quality of technical education received by that individual. Such education must be one that involves problem identification, calculated decision-making, practical application of scientific and technical know-how in problem solving, and the exactness in production of equipment and tools. The individual must see himself as holistically part of the total development. This means that technical education is the principal instrument by which all modern national and international development can be attained in national development.

It will be but wise on the part of the Government to investment in technical education at all levels of the nation's educational system. This could be a major step to set free the country's economy from technological failure and today's world demands.

The country's economy depends on human power, knowledge and skills and economic power in turn depends on human technological advancement.

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## **Recommendations**

1. Regardless of the current global and national economic breakdown the government should still afford to spend the greater proportion of revenue allocations on technical training both at home and abroad.
2. Technical training is very essential because there is always improvement in technological advancement in the world.
3. Fund allocation to institutions of technology should be based on quality and effectiveness of the programmes and their products
4. Improvement in Remunerations/incentives of technical professionals, especially technical teachers, to exceed those of their counterparts in other professional occupations.
5. The curriculum content must be structured to cater for the needs of the country and environment for national development that is it must be practically oriented which requires the involvement of experts.
6. Proper implementation of the curriculum content is of great concern and importance to address the needs of the country and the environment/society.
7. Formulation of strong policy on technical education for teachers, professionals and stakeholders as guide for its success.

The Vocational Training Reform Act came into force on 1 April 2005. The dual system of vocational education and training provides all young people with an opportunity to enter skilled employment and take responsibility for their own lives. At the same time, it trains tomorrow's skilled labor and thus makes a significant contribution to Country's competitiveness and prosperity.

8. Government must involve local technicians to bring their own ideas and modify that to meet the own needs and the needs of the environment /country.

9. Government and non-government organization should support technical and vocational education programs in technical and vocational institution. Government should enforce, with regard to technical and vocational education, the implementation of 6,3,4,4 education policy.
10. Provisions of standard building for technical training centers, and equip the workrooms with modern equipments. Also to provide teaching and learning materials. Recruit and provide further study facilities for teachers with certificates in technical studies.
11. Government should set up national career guidance and counseling units in the ministry of education. The ministry in turn will establish this unit in all learning institutions. The National Career guidance and counseling unit shall be charged with the responsibility of sensitizing the nation on the importance of technical and vocational education and training through electronic and press media, and to organize public lectures to explain the importance of technical and vocational education and training.
12. The national curriculum development unit should review the technical and vocational curriculum for all technical and vocational education programs at all levels. In this way technical and vocational institutions shall have harmonized teaching syllabuses.
13. For the nation to produce human resource that are highly trained technicians in modern technology, the government should vocationalize system of education by establishing separate technical and vocational schools at all levels (Primary, Junior and Senior or Secondary Schools and tertiary institutions). These institutions shall be called schools of technology with a well designed curriculum on technology.
14. Government should award scholarship to girls who aspire to a technical career which are not female stereotyped, such as hairdressing, catering/home management and dress making. Provision should be made for female technicians to visit other countries where female engineers are playing significant roles in the development of their nations.

## **REFERENCES**



Al. Jardania, M.S (2012) Policy Development of Technical and Vocational Education and Training in Omam: Challenges and Opportunity. Paper presented at the 3<sup>rd</sup> TVET International Congress at Shangai.

Dyankov, A. (1996): Current issues and trends in technical and vocational education UNESCO: Paris.

Datol, I.G.; Danwanzan, E.G.; Nyapson, C.G.; Padung, L.L.; Udah, M.P.; Bentu, S & Okwori, R. (2004): *Fundamentals of Vocational Technical Education. Implication for government funding.*

Education Act (2004): Government of Sierra Leone

Fafunwa, A.B. (1974). *History of Education in Nigeria*. London: George Allen & Unwin Ltd.

Goel V.P. (2008): Technical and Vocational Education and Training (TVET) system in India for sustainable development- Ministry of Human Resourance Development, Government of India.

GORDON, HOWARD R. D. (1999): *The History and Growth of Vocational Education in America.*

Hartl, M. (2009): Technical and vocational education and training (TVET) and skills development for poverty reduction – do rural women benefit. FAO-IFAD-ILO Workshop: Italy.

HYSLOP, EMERY J. (2000). "An Assessment of the Historical Arguments in Vocational Education Reform." *Journal of Career and Technical Education* 17 (1):23–30.

Tagoe M. (2009): A hand book for writing research proposals- Ghana Universities Press Accra

***The Turing Foundation - Vocational/training project (2013) -***

*[www.turingfoundation.org/kw\\_beroepe\\_uk.html](http://www.turingfoundation.org/kw_beroepe_uk.html)*

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