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Challenges of implementing technical and vocational Institution-Led programmers in Bo City, Southern Sierra Leone

*Saffa Barbee Massaquoi¹, David A. Mansaray² Justin Gbessay Goba³ and Mohamed P Ngegba⁴

¹Department of Agricultural and Home Economics Education, School of Education, Njala University. Sierra Leone.

² Department of Agricultural and Home Economics Education, School of Education Njala University. Sierra Leone.

³ Sierra Leone Opportunity Industrialization Center (SLOIC), Bo. Sierra Leone.

⁴ Department of Extension and Rural Sociology, School of Agriculture, Njala University, Sierra Leone

Abstract

Technical-Vocational Education and Training (TVET) is that aspect of education that exposes the learner to the acquisition of demonstrable skills that transform into economic benefits. TVET is a broad term of study encompassing technologies and all related sciences. It also involves acquiring practical skills, attitudes, understanding, and knowledge related to occupations in various sectors of economic and social life. The study examined critically the challenges faced by Technical Vocational Institutions in the Implementation of Technical and Vocational Programmes in Bo city. The main objective was to identify the challenges/ problems of Technical and Vocational Institutions in implementing Technical Vocational Programmes in Bo city. The study used a mixed design consisting of descriptive and inferential statistics. The research used qualitative and quantitative approaches to capture the data. The population is 331 subjects with a sample size of 75 from all the technical Vocational Institutions in Bo City. The significant findings were that the Technical Vocational Institutions in Bo city were operating with an insufficient academic and supporting staff, poor Information Communication Technology, and insufficient supply of electricity and water. The resources provided by the government were grossly inadequate for the operation of Technical and Vocational Institutions; hence inadequate human, finance, and material resources posed severe operational challenges. Conclusively, the Technical Vocational Institutions in Bo City provided training in diverse disciplines. These include; tailoring, catering, Hair dressing, Agriculture, Masonry, Gara-Tie-Dying, and farm mechanics. The programs offered were relevant and practical-oriented. The Sierra Leone Government is the primary provider of resources for running Technical Vocational Institutions in Bo City, but the resources provided were grossly inadequate. The significant recommendations were: that government should allocate adequate funds for the management of Technical Vocational Institutions. Technical Vocational Institutions should improve on the infrastructural and accommodation facilities to enable them to enroll more students as the demand for these institutions increases every year. Adequate water and electricity should be available in all the Technical and Vocational Institutions in Bo City.

Keywords: Challenges, Technical Vocational Institutions, Implementation, Programmes, Resources.

Introduction

Technical-Vocational Education and Training (TVET) is that aspect of education that exposes the learner to the acquisition of demonstrable skills, transforming into economic benefits (Akerele, 2007)^[2]. UNESCO views TVET as a broad term encompassing the study of technologies and related sciences and acquiring practical skills, attitudes, and understanding. Furthermore, it considers its knowledge related to occupations in various sectors of economic and social life. Technical Education forms the basis of any nation's economic, social, and political development. Investment in Technical Education helps to foster economic growth and enhance productivity. It also contributes to national and social development and reduces social inequality. UNESCO argues that the level of a country's education is one of the critical indicators of its level of development. Globally, education is a fundamental

human right. In 1948 the Universal Declaration of Human Rights laid down Article 26, that everyone had the right to education and that education should be free, at least in the elementary and fundamental stages. Okebukola (2012)^[8] stated that the challenges of TVET are numerous. They include inadequate human and material resources in terms of quality and quantity; poor funding of TVET, inadequacies in infrastructural facilities; poor quality preparation of lessons by TVET teachers; and social vices. According to McGrath, governments seek solutions to the growing youth unemployment. Moreover, the problem of where young people will go after primary education led to a renewed focus on the TVET sector, particularly in 2010, when UNESCO announced that the 10th Edition of the Global Monitoring Report would be on skills development. McGrath posits that the TVET sector is an issue that 'is currently neglected by academics notwithstanding its International Journal of Agriculture Extension and Social Development

significance to millions of people and its fruitfulness for broader theoretical work on the links between education and development in Africa.' Historically, the foundation of TVET is on the process of industrialization and economic development; its policies are often the informed economic and equity perspectives. However, McGrath argues that this approach to TVET is grounded in an outdated development model. Psacharopoulos postulate that conceptualising TVET in terms of human capital theory means that colleges have to focus on skills development for employability, which may be confusing. However, acquiring some form of training may not necessarily guarantee a job, although it increases the chances. The belief in investing in human capital has been widespread in South Africa.

Furthermore, the TVET sector fills this gap through skills development. However, Vally and Motala (2014) [11] postulate that if human capital theory continues to frame the TVET sector, it will see the sector as pivotal in solving a not primarily educational problem'. Instead, the emphasis is the role of TVET in 'deepening knowledge, developing capabilities (including hard and soft skills required to work) and strengthening (occupational and wider social) identities that enable learners to become both workers and citizens'. Vally and Motala (2014) [11] argued that education and training should instil in society the importance of knowledge essential to the development of a citizenry. For the fullest expression of civil rights and responsibilities, such elementary rights as numeracy and literacy, accessing public goods, making informed choices, and, most importantly, ensuring more significant levels of democratic accountability of public representatives and organisations. The Human Resources Development Council of South Africa (HRDC) argues that the human development approach acknowledges the new challenges that the global economy and TVET face: skills shortage; differences between the rich and the poor; and marginalization based on social class, reality, gender, and ethnicity.

After independence, previous governments of Sierra Leone had periodically reformed the education and training system in the country. These governments emphasize Technical and Vocational Education and Training to make our educational system more relevant for the world of work, boost the informal economy, and minimize unemployment and poverty. Both private individuals and Non-governmental Organisations (NGOs) have also been playing complementary roles in helping to provide skills training to the Sierra Leonean citizenry, especially those in the informal sector (Agbenyo, 2010)^[1]. Nevertheless, the implementation of the TVET curriculum has not been vielding the expected outcome and results. TVET have not, as enshrined in the National Policy on Education (NPE), met its aim and objectives. However, this explains why the labour market's persistent petition that Sierra Leonean university graduates (TVET graduate inclusive) do not

possess employable skills due to implementing the educational curriculum. Thus, this work intends to examine critically the challenges facing the Technical and Vocational Education (TVET) curriculum in institutions in Bo city and the way forward.

This study would provide valuable insights to the government, heads of technical and Vocational Institutions, development partners, and the communities on the effects and challenges likely to be encountered during the implementation of the Technical and Vocational Education initiatives. The study's findings could provide the Ministry of Technical and Higher Education data on how technical and vocational education heads implement the Scheme. In turn, the Ministry of Education may analyse these strategies to take adequate measures regarding the implementation of Technical and Vocational Education in Sierra Leone.

Purpose and objectives of the study

The study aimed to investigate the challenges faced by technical and vocational institutions in implementing technical and vocational programs in Bo City.

- i. The specific research objectives were:
- ii. Identify the challenges/Problems of technical and vocational institutions in the implementation of technical and vocational programmers in Bo city.
- iii. Assess the resources (human, finance, and materials) available in technical and vvocational institutions in the implementation of technical and vocational programmes in Bo city
- iv. Examine the roles of technical and vocational institutions in the implementation of technical and vocational programmers in Bo city,
- v. Assess the stakeholder's perceived impacts of technical programmers offered in technical and vocational institutions in Bo city.

Methodology

Study area

The study was conducted in Bo city Southern Sierra Leone between 16th June 2020 and 13th March 2021. Next to Freetown is Bo, the largest city in the Southern Province of Sierra Leone. Bo, the second capital city and the administrative center of Bo District and the Southern Region, has a population of 174,369 (Statistics Sierra Leone (SSL), 2015). Bo is an urban center and lies approximately 160 miles (250 km) east of Freetown and about 40 miles (71 km) to Kenema. The city is the home of one of the campuses of Njala University. Bo is the home to a significant population of many Sierra Leone's ethnic groups, but the mender people form the plurality of the city's population. Agriculture and trade are the dominant economic activities of the population. During the decentralization processes, several offices were constructed in Bo.



Map of Sierra Leones Showing Bo District



Map of Bo City

Design of the Study

The study was a mixed design based on qualitative and quantitative approaches to collect primary data from the self-participant completed questionnaire and focus group discussion.

Population and Sample Size

The study targeted all the ten heads of Technical and Vocational Institutions and 120 tutors, the deputy director of technical and higher education, and 200 students from the

technical and vocational institutions in Bo city. Therefore, the total population for the study was 331 subjects. The sample size for the study was seventy-five (75). The selection of sample size was based on the recommendation of Mugenda. According to Mugenda & Mugenda, the sample size for descriptive studies should be between 10% - 20% of the population.

Sampling Matrix

Description	Population	Sample Size
Tutors	120	24
Current Students	150	30
Past Students	50	10
Heads of Technical and Vocational Institutions	10	10
Deputy Director of Technical and Higher Education	1	1
Total	331	75

Table 1: The description of Sample population and Sample Size

Questionnaire and data collection procedure

The researchers developed questionnaires guided by the study's objectives to elicit information pertinent to the investigations. The researchers designed instruments bearing in mind that they elicit precisely the type and quality of required data; that is, the researchers ensured that the questionnaires developed were valid and reliable. Experts from the Department of Agricultural Education, Njala University, validated the questionnaire, pilot-tested for reliability with a selected sample of respondents in Technical and Vocational institutions in Kenema City.

Questionnaires collected data from the study population sample. The researchers administered the questionnaires alongside trained enumerators of social workers. They conducted Focus Group Discussions (FGD) among homogeneous sub-sample populations, including the principal/heads of Technical and Vocational institutions, tutors/teachers, past students, Deputy Directors of Technical and higher education in Bo City.

Data Analysis

The quantitative data collected through the questionnaires were analysed using Microsoft Excel and the Statistical Package for Social Sciences (SPSS) version 20. The researchers presented data using Bar charts and other pictograms.

Results and Discussions

Challenges/problem of technical vocational institutions in the implementation of technical vocational Programmes in Bo City

Figure I illustrates the frequencies and percentages of Technical Vocational Institutions on the challenges faced by principals/heads in implementing Technical Vocational

programs in their institutions. The results revealed that 80% of the respondents stated that inadequate funding was challenging, while 20% indicated moderately challenging. Also, 60% of the respondents claimed that an insufficient academic staff is very challenging. Furthermore, 80% of the respondents indicated expansion of the infrastructure as very challenging. About 60% and 40% of the respondents stated that poor information communication technology (ICT) facilities and insufficient electricity supply were very challenging, respectively, for the institutional heads. Also, 70% of the respondents indicated poor laboratory facilities as challenging, while 80% of the respondents stated irregular attendance of tutors as very challenging. Eighty per cent (80%) of the respondents indicated "Weak research" and "Poor toilet facilities" as very challenging. About 70% of the respondents stated infrastructure maintenance as very challenging, while 60% indicated that insufficient water supply is very challenging for their institutions. About 60% of the respondents claimed deteriorating infrastructure, while that same percentage stated sustenance of academic and supporting staff as very challenging.

The study revealed that 80% and 60% of the respondents said, inadequate funding and insufficient academic staff are very challenging in running technical vocational institutions in Bo City. The findings are in line with Beatjes' (2014) report that lecturers in Technical Vocational Institutions in Sierra Leone are part of the marginalised "Educators". About 20% of the principals indicated weak human capital as very challenging, while 60% of the respondents claimed moderately challenging. Most of them are marginalized lecturers in technical-vocational institutions in Bo City. They are marginalised as a result of people's negative perception of technical-vocational institutions.



Source: Field Survey 2021

Fig 1: Challenges/Problems of Technical Vocational Institutions in the implementation of Technical Vocational Programme in Bo City

Availability of Resources (Human, Finance, Materials) in technical and vocational institutions in implementing technical vocational programmes in Bo City

Figure 2(i) depicts the responses of the principals/heads in terms of availability of material resources in the Technical Vocational Institutions for the implementation of Technical Vocational Programmes in Bo city. The results revealed that 80% of the principals/heads indicated that textbooks for all courses were available. Also, 80% of the respondents stated they were moderately adequate in terms of adequacy. Eighty percent of the principals claimed that library facilities were available in their institutions, while 20% indicated that library facilities were highly adequate. About 50% of the principals /heads claimed that cutlasses were available; 40% of the respondents stated that they were minimally adequate in terms of adequacy. Fifty percent (50%) of the respondents indicated "Land and power tillers" were available, in terms of adequacy; 40% stated they were highly adequate.

About 80% of the respondents stated that running water was available in their institutions, while 20% of respondents claimed it was unavailable. Also, 60% of the heads indicated that watering cans were available in their institutions, while 40% stated they were unavailable. Also, 80% of the respondents claimed the items were moderately adequate in terms of adequacy. In contrast, 10% of the principals indicated moderately adequate. Again 50% of the respondents claimed electricity facilities in their respective institutions were available while 50% of them declared that electricity facilities were unavailable. Regarding adequacy. 50% of the respondents claimed that they were minimally adequate. About 70% of the respondents claimed that classroom space was available in terms of adequacy; about 80% indicated that they were moderately adequate. Also, 80% of the respondents stated that tractors were unavailable

in their institutions, while 20% of the heads declared that they were available. Furthermore, 80% of the heads claimed computer facilities were not available in their respective institutions, while 20% of the respondents stated they were available. The researchers found that fifty percent of the principals indicated that fertilisers were available in their institutions, while the same percentage claimed they were minimally adequate. Also, 80% of the respondents stated that planting materials were unavailable in their institutions, while 20% indicated they were available. Regarding adequacy, 80% of the principals claimed that the planting materials were moderately adequate. About 50% of the respondents stated that insecticides were available. At the same time, the same percentage declared that they were not available. In terms of adequacy, 40% of the respondents indicated highly adequate. In comparison, 10% of the respondents stated moderately adequate.

One of the main objectives of technical vocational institutions is to develop and produce skilled human resources for sustainable agricultural and vocational production to enhance self-reliance and national development. This objective requires many resources accessible to all technical and vocational institutions. This objective also requires the acquisition of skills by the learners through practical activities. Lack of resources or similar situational barriers will adversely affect the efficient and effective implementation of Technical Vocational programmes and make the objectives appear plausible at face value but not tenable. For instance, trainees cannot grow plants if material resources like tools and land laboratory, planting materials are unavailable. Neither would they acquire skills of tailoring, Gara tying dying, carpentry, and masons, catering if there were no material resources to enhance effective and efficient training.



Source: Field Survey 2021

Fig 2(i): Frequencies and percentages on materials resources available in technical and vocational institutions for the Implementation of technical vocational programs in Bo City

Sources of resources in technical vocational institutions in Bo City

The data in Figure 2(ii) shows the responses of principals of Technical Vocational Institutional on the sources of

resources available in their respective institutions. The results revealed that 90% of the respondents indicated that the Sierra Leone government was the primary source of human resources in Technical Vocational Institutions.

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About 80% of the respondents further revealed that the government was also the primary source of these institutions' material and financial resources. Also, 70% of the respondents claimed that Sierra Leone Government was the primary source of water and land for the technical and vocational institutions. Furthermore, 60% and 50% of the respondents indicated that Non-Government Organization (NGOs) was the minor source of finance and material resources for these institutions. About 50% of the respondents stated that trainees were the minor sources of finance and material resources for the institutions.

Figure 2(ii) depicts that 90% of the principals/ heads of Technical Vocational Institutions indicated that Sierra Leone Government was the primary source of human resources in vocational institutions. At the same time, the results further revealed that 80% of the heads claimed that Sierra Leone Government was the primary source of material and financial resources in those institutions. It implies that the Government of Sierra Leone is the main employer of all personnels in these institutions. These findings confirm the fact that salaries and wages of personnels were paid by the employer, the Government of Sierra Leone. With the sagging economy, the government of Sierra Leone alone cannot afford the huge compensation packages for all the staff. This means that salaries and wages of administrators and the teaching staff are generally affected. Therefore, the effectiveness of teaching and learning in these institutions is poor, leading to the production of weak graduates.



Source: Field Survey 2021

Fig 2(ii): Frequencies and Percentages on the Sources of Resources Available in Technical and Vocational Institutions in Bo City

Role of technical and vocational institutions in the implementation of technical vocational programmes in Bo City.

Figure 3 below reveals the responses of principals in relations to the roles of Technical and Vocational Programmes in Bo City. Eighty percent (80%) of the respondents claimed that students were trained in the discipline of electricity. That same percentage indicated that students were trained in the area of plumbing. About 90% of the respondents stated that students were trained in the discipline of Masonry while 50% of the principals claimed that students were trained in the disciplines of Farm Mechanics and Gara tie Dying. Hundred percentage (100%) of the respondents declared that students were trained in the disciplines of tailoring, catering and hairdressing. Also, 90% of the respondents stated that students were trained in the discipline of animal science, while 60% claimed that students were trained in the disciplines of crop science and crop protection. Fifty percent (50%) of the respondents indicated that the institutions facilitated training in fish

farming while 50% refuted the statement. Furthermore, 60% of the respondents claimed that the students were trained in the area of Carpentry while 40% of the respondents stated that the students were not offering carpentry in their institutions. About 50% of the respondents indicated that the lecturers in the institutions "carried out research" while 50% of the respondents refuted the statement. Also, 60% of the respondents claimed that the students were trained in solar installation while 40% of the respondents stated students were not trained in solar installation. About, 70% of the respondents declared that students were trained in Air Conditioning. Eighty percent (80%) of the principals claimed that students were trained in the disciplines of building construction and motor driving. Also 70% of the respondents stated that students were trained in the area of land surveying while 100% of the respondents indicated that student were trained in the discipline of Agriculture. Furthermore, 70% of the principals claimed that their institutions were not offering home management while 30% of the principals stated they were offering home management. Hundred percent (100%) of the principals indicated that their institutions did not provide training for refrigerator technicians. Also, 90% of the principals stated that their institutions did not provide training in Black Smiting and Business Studies.

Hundred percent (100%) of the heads of Technical Vocational Institutions in Bo City stated that they provided training in the disciplines of Gara tie-dying, Tailoring, Catering, and Hairdressing. This study is in line with the study conducted by Valley and Motta (2014)^[11]. The authors opined that education and training should instil in society the importance of knowledge essential for the

development of a citizenry and to ensure greater levels of democratic accountability of public representatives and organisations. The study's findings are also similar to the finding of stated that skills training is essential to the functioning of our society. The author draws attention to society's principal business conducted through specially trained professionals. These include designing and constructing buildings, growing crops and rearing animals, training electricians, plumbers, caterers, tailors, and carpenters, and providing quality education for our children. These pieces of training can help our learners to be selfreliant.



Source: Field Survey 2021

Fig 3: Role of technical and vocational institutions in the implementation of technical vocational programmers in Bo City

Impact of technical vocational programmer offered in technical and vocational institutions on Bo City

Figure 5 illustrates the responses of past students of Technical Vocational Institutions on the impact of Technical Vocational Programmes on Bo City. The researcher found that 90% of the respondents claimed that trainees' skills and knowledge developed in masonry had a high impact, while 10% stated low impact. Also, 70% of the past students indicated that the trainee's skills and knowledge in farm mechanics have a high impact, while 30% stated moderate impact. All (100%) of the respondents stated high impact on development trainees skills and knowledge in Agriculture. About 80% of the respondents claimed high impact of an increased level of education of beneficiaries, while 20% declared moderate impact.

Furthermore, 80% of the respondents claimed high impact on construction and building techniques improvement, while 20% stated low impact. The statistics showed that 50% of the respondents indicated a high impact on improving Gara tie and dying in Bo City, while 50% claimed moderate impact. About 60% of the respondents stated high impact on hairdressing/cosmetology, while 30% claimed moderate impact. Also, 90% of the respondents stated a high impact moderate impact. A hundred percent (100%) of the respondents stated high impact on metal works as metal works were visible all over the city of Bo. Also, 80% of the respondents claimed moderate impact on improvement in home management skills, 10% stated high impact, and 10% claimed low impact. The researcher also found that 60% of the respondents stated moderate impact on carpentry and building design skills, while 40% claimed high impact. Also, 50% of the past students stated that there is a moderate impact on improving the electricity and light system in Bo City, while 30% claimed low impact. Regarding auto mechanics, 50% of the respondents claimed high impact. About 90% of the past students claimed a very high impact

on plumbing and tailoring techniques, while 10% indicated

About 90% of the past students claimed a very high impact on improvement in plumbing, tailoring, Agriculture, Gara Tie-dying, and Masonry in the city. The study results indicate that Technical Vocational Programmes have a considerable impact on the people of Bo municipality. One could visibly see carpentry workshops, Gara tie-dying Centers, metal workshops, tailor shops, and catering centres all over the city. Graduates from Technical Vocational Institutions own most of the centers in Bo city. Most of them are in their youthful ages between 15 and 35 years. One would see the smile on their faces always indicating that their standard of living has improved, a clear indication that the Technical Vocational Programs have a considerable impact on people's lives in Bo City. In conclusion, Technical Vocational Education and Training at all levels will enable Sierra Leoneans to utilize their talents and natural resources efficiently and effectively to attain and maintain desirable lifestyles.



Field Survey, 2021

Fig 5: Statement of impact of technical/vocational programmers offered in technical vocationalIinstitutions in Bo City

Conclusions and Recommendations Conclusions

Conclusively, technical-vocational institutions in Bo city provided training in diverse disciplines; including, Tailoring, Catering, Hairdressing, Agriculture, Masonry, Animal Science, Motor driving, Gara-tie-dying, and Farm Mechanics. These trainings were relevant and practical oriented. The Sierra Leone Government is the primary provider of resources for running technical-vocational institutions in Bo city. Also non-governmental organizations (NGOs) and other humanitarian organizations were the provider of financial and material resources in most of the technical vocational institutions in Bo City. But the technical and vocational institutions were managed without adequate funds from government. Administrative, academic, supporting staff and farm assistants were available in all the technical and vocational institutions in Bo city but were moderately adequate. Resources, including planting materials, fertilisers, insecticides, farm tools, textbooks, cutlasses, teaching and learning facilities, were available but inadequate. These challenges harmed both the students and institutions as poorly motivated staff could not perform at their best thus, producing graduates with lower academic quality.

Recommendations

Based on the findings, the researcher made the following recommendations and conclusion of the study.

- 1. Adequate funds should be allocated to manage Technical Vocational Institutions in Bo City and the country.
- 2. Academic, supporting, administrative and farm assistants should be motivated to work harder to maintain high academic standards as motivated workers perform better.
- 3. Adequate Information and Communication Technology (ICT) facilities should be available in Technical vocational institutions with a continuous electricity supply.
- 4. Technical Vocational Institutions should improve the infrastructural and accommodation facilities to enroll more students as the demand for these institutions increases.
- 5. Technical Vocational Institutions should be supplied with adequate running water and continuous power supply to enhance the smooth running of the institutions.
- 6. Government should encourage non-governmental organizations (NGOs) to render support in the management and run of technical vocational institutions in Bo City.
- 7. Trainees should be supported with training materials in the Technical Vocational Institutions for efficient and effective training as most of the programs offered in the institutions are practical oriented.
- 8. The curricula of technical vocational institutions should

be re-structured to accommodate practical courses as skills training is the bedrock of the programs offered.

- 9. Students and lecturers should be encouraged to research technical and vocational institutions in Bo City. The lectures should be provided with funds to conduct research, leading to professional growth and development for the tutors.
- 10. Government should establish construction firms for graduates of Technical Vocational Institutions in Bo city to practice the vocational skills. This practice will have a positive impact on the community.

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