Ministry of Education
REPUBLIC OF GHANA

CTVET
COMMISSION FOR TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

GHANA TVET REPORT

2ND EDITION (2023)

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FOREWORD BY THE MINISTER FOR EDUCATION

In recognizing the rapidly changing labour markets and evolving skills needs due to globalization, technological progress, demographic transformation, and climate change, the government initiated the Technical and Vocational Education and Training (TVET) report. This was to collect data on a set of indicators and measure the efficiency and effectiveness of the TVET sector.

The government has implemented several initiatives, including FREE TVET FOR ALL and completing the implementation of the 5-year Strategic Plan for TVET Tranformation, among other key reforms and initiatives within the TVET landscape. This report serves as one of the key initiatives and a means of measuring the impact of these initiatives. Government, individuals, businesses, and training institutions all require accurate and reliable information to make decisions regarding TVET, whether in terms of delivery, access, quality, financing, or training investments. This necessitates assessing the status of implementation of various TVET programs and reforms, as well as evaluating future prospects in the labour market and the potential imbalance between the demand for and supply of skills.

Having annual reports that measure progress and the status of activities and initiatives is an essential component of a sound productive transformation and reform strategy. These reports enable us to formulate forward-looking approaches to skills needs, which are at the heart of strategic policy mechanisms, with skills development planning integrated into the core mandate of the regulator for TVET in the country. The government has also identified this report as a key detection and preventative measure to avoid skills mismatch, skills shortage, imbalances in financing, quality control, among others, as one of the first building blocks in a strong training and skills development system.

It is my fervent hope that this publication will inspire and guide our decision-making going forward, ensuring that we have put in place TVET policies and strategies that benefit all.

DR. YAW OSEI ADUTWUM (MP)
MINISTER FOR EDUCATION

FORWARD BY THE DIRECTOR GENERAL OF CTVET

As we continue to fulfil our obligation to provide annual reports on the state of skills development in our nation, it is with great pride that we present the second edition of the Ghana TVET report. This comprehensive report serves as a vital tool in assessing the impact of the current Technical and Vocational Education and Training (TVET) system on the youth of Ghana.

The potential of TVET to catalyse progress and societal transformation is widely recognized. However, there exists a disconcerting paradox between its acknowledged potential and its actual performance. In response to this challenge, the Ministry of Education, in collaboration with the Commission for Technical and Vocational Education and Training (CTVET), the TVET Service and Technical Universities have spearheaded significant reforms within the TVET landscape.

We acknowledge that an effective TVET system equips graduates with the necessary skills for today's job market while also preparing them to adapt to future skill demands. A robust TVET framework not only supports sustainable employment and productivity but also aligns with our nation's commitment to achieving the Sustainable Development Goals. While Ghana shares many of the global trends impacting TVET, it also faces unique challenges specific to its context. Thus, the annual development of this report by the Commission is essential in providing accurate data and insightful analysis to inform strategic planning and decision-making processes.

The Commission remains steadfast in its dedication to realizing the government's vision of making TVET aspirational and accessible to all. This includes promoting equity, ensuring sustainable financing, fostering environmental sustainability, upholding quality standards, and fostering inclusion within the TVET sector.

With great pleasure, we present the second edition of the TVET report, underscoring our commitment to our mandate and reaffirming our position as a world-class TVET regulatory body dedicated to nurturing a globally competitive skilled labour force.

DR. FRED KYEI ASAMOAH
DIRECTOR GENERAL, CTVET

ACKNOWLEDGEMENT

In the ever-evolving realm of Technical and Vocational Education and Training (TVET), the Commission for Technical and Vocational Education and Training embarked on a pivotal mission to develop the second edition of the TVET Report. This narrative illuminates the collaborative endeavors of committed individuals who contributed to crafting of this vital publication.

First and foremost, the Commission expresses its gratitude to the Honorable Minister for Education who provided policy direction through the Joint Declaration of Intent between Ghana and Germany and other related avenues.

The Commission extends special appreciation to the Director General, Dr. Fred Kyei Asamoah, as the main architect for his overall leadership, inspiration, encouragement, and support of the working group during the development of the TVET Report. Dr. Fred Kyei Asamoah also provided the enabling environment, supervision, and guidance to ensure that this document meets all standards.

Mr. Samuel Thompson, Coordinating Lead for Policy, Planning, Projects Research, Monitoring, and Evaluation (PPPRME) department at CTVET, for his thoughtfulness and logistical support during the development of the second edition of the TVET report, and to Ms. Julia Olesen, Technical Advisor from GOVET - BIBB Germany, both of whom provided leadership, guidance, and consistent devotion that ensured the smooth execution of this report from inception to completion.

In pursuit of the research methodology and the instrument to be deployed for the collection of data for the TVET report and analysis, the Project, Planning, Policy, Monitoring & Evaluation (PPPRME) department spearheaded the data collection and compilation process. Staff members diligently gathered information from diverse sources, ensuring meticulous accuracy and reliability. They conducted thorough analyses to unveil key trends and challenges within the TVET sector.

The Commission wishes to acknowledge the invaluable contributions of the following team members and their respective departments: Mrs. Hannah Okyere, Mr. Vincent Yao Azorli, Mr. Emmanuel Yaw Mensah, Ms. Joyce Akyeamaa Takyi, Mr. John Kwabena Debrah, Mr. Justice Arkorful, Ms. Jennifer Akotaa Konadu, and Mr. Saide Mahama of the Policy, Planning, Projects, Research, Monitoring & Evaluation (PPPRME) department.

Also worthy of mention are Mr. Theophilus Tetteh Zogblah, Mr. Jonathan Afetorgbor, Ms. Abigail Abrokwah, Mr. Abraham Asuama Yeboah, Mr. Richard Okoampa-Larbi of the Standard, Curriculum Development, and Enforcement (SCD&E) department, as well as Mr. Albert Opare of Corporate Affairs (CA). Their meticulous research and analysis of the various data collected provided the foundation for the comprehensive findings presented in this report.

Each member of this working group brought distinctive skills and viewpoints to the forefront. From the Policy, Planning, Project, Research, Monitoring, and Evaluation (PPPRME), Corporate Affairs (CA), and Standard, Curriculum Development, and Enforcement (SCD&E), every individual provided invaluable and insightful feedback and constructive criticism that helped refine the report and elevate its quality to meet the highest standards and shape its content.

Additionally, the Commission would also like to express gratitude to the administrative staff and support personnel, Ms. Karen Wuaku, Ms. Joyceline Asamoah, Ms. Fortuna Konadu, and Mr. Enoch Obiri-Agyepong, and the entire CTVET Staff. Credit is attributed to Dr. Emefa Amponsah and Mr. Kakraba Conrad for their final editing and proofreading of this report, ensuring its clarity and coherence, refining the language and structure to enhance readability and comprehension. Dr. Amponsah's steadfast dedication to precision and accuracy is truly commendable.

Lastly, the Commission extends appreciation to all stakeholders, including government agencies such as GETFUND, 1D1F under the Ministry of Trade and Industry, Technical Universities for the provision of enrollment data, Pre-tertiary Institutions, Industry Partners - TVET Service led by the Director General, Mrs. Mawusi Awuti, and the training, assessment, and quality assurance unit of TVET Service for their immense contribution in facilitating data collection and other individuals whose collaboration and input were essential in shaping the findings and recommendations of this second edition of the TVET report.

The collaborative endeavors of the dedicated staff members involved in crafting the second edition of the TVET Report have yielded a comprehensive and enlightening publication. Their expertise, dedication, and synergy have been pivotal in the report's success, promising a positive impact on the realm of TVET. As we reflect on this transformative journey and look forward to the next edition, we extend our heartfelt appreciation once again to each member of the working group for their exemplary contributions.

EXECUTIVE SUMMARY

The potential of TVET to catalyse progress and societal transformation is widely recognized. However, there exists a disconcerting paradox between its acknowledged potential and its actual performance. In response to this challenge, the Ministry of Education, in collaboration with the Commission for Technical and Vocational Education and Training (CTVET) and the TVET Service, has spearheaded significant reforms within the TVET landscape in Ghana.

The report adopted quantitative and qualitative research approaches. These approaches allow for a comprehensive understanding by combining existing information (secondary data) with new insights from respondents (primary data).

To enhance the Government's commitment to revamp the TVET sector, the first-ever Deputy Minister In-Charge of TVET was appointed, in addition to the establishment of the Commission for TVET, the TVET Service, and The Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development (AAMUSTED).

Our research shows that public pre-tertiary enrolment for the 2022/23 academic year was 54% higher relative to the 2020/21 academic year. The enrolment data shows that enrolment in TVET institutions has steadily increased from 32,407 in the 2020/21 academic year to 46,300 in the 2021/22 academic year. Again, in 2022/23, the figures have increased to 50,049.

The steady increase in the population of learners at the pre-tertiary level is evident. The rise in the population of learners is not at a constant rate but shows encouraging movement; the population increased to 41,696 in 2016 from 31,281 in 2015.

The year-on-year enrolment figures in the Technical Universities from 2016 to 2022 saw a steady increase. The data shows an initial 35.08% increase in enrolment from 2016 to 2017, followed by slight increases in subsequent years. The year-on-year increase in enrolment reflects high interest in acquiring technical education.

Interventions to improve access to TVET at the pre-tertiary level include measures put in place by the state to ensure that persons of school-going age are not denied the opportunity. Some of the interventions include Free TVET, The Ghana TVET Voucher Project (GTVP), the Ghana Education Outcome Project (GEOP), RPL, and Complementary Education.

In line with the above provision, the Government of Ghana, led by President Nana Addo Danquah Akuffo Addo, operationalized this constitutional provision in 2017, where 47 public TVET institutions were added to the free SHS program, while the rest were added later.

The Free TVET Policy is in line with the Sustainable Development Goals (SDGs- 4) Target One, which stipulates that ‘‘By 2030, all boys and girls complete free, equitable, and quality primary and secondary education, leading to relevant and effective learning outcomes’’. Vocational and technical education and training will be accessible and available in all forms.

In 2022, 231 public Technical and Vocational Education and Training (TVET) Institutions in the country were rolled onto the Free TVET program. This is to ensure that vocational education and training are made generally available and accessible to all.

The Ghana TVET Voucher Project (GTVP), which began in 2017, is a project under Ghana-German Financial Development Cooperation, funded by the KfW German Development Bank and implemented by the Commission for Technical and Vocational Education and Training (CTVET). A total of nineteen thousand and sixty-two (19,062) master craft persons and apprentices have been trained and certified on the National TVET Qualification Framework as part of the implementation of the project.

The analysis of accredited TVET institutions across regions reveals a varied landscape of technical education infrastructure in Ghana. Greater Accra and Ashanti regions lead with the highest numbers of accredited institutions, 82 and 43, respectively. Northern (27) and Eastern (23) regions also show substantial investment in technical education. Meanwhile, Central (17), Volta (13), and Western (11) regions exhibit moderate numbers. However, Upper West (6), Brong Ahafo (1), and several other regions have fewer accredited institutions.

Nearly 25% of the respondents reported that the conditions of their classrooms are not conducive to teaching and learning. Whereas 15.22% of the respondents indicated that they have excellent classrooms, 33.61% informed that their classrooms are in good condition. For a classroom to be considered in good condition, it needs to be furnished, well-ventilated, and have good lighting, among other criteria.

The cornerstone of quality TVET lies in the provision of functional workshops and laboratories, essential for practical learning experiences. The survey, which garnered responses from 229 institutions, revealed that nearly 100% of respondents have access to workshop facilities or laboratories. Further analysis delved into the proximity of these facilities.

For the TVET sector to have a demand-driven curriculum, industry has a crucial role to play in building strong industry linkage, setting occupational standards, helping learners through the Workplace Experience Learning (WEL), and finally providing job opportunities after completion of the program of study. Industry, as a key component, is reached through respective established Sector Skills Bodies, which are advisory bodies to a group of related industries.

As of 2023, the economic sectors identified by the Commission have increased from 22 to 24. The total number of SSBs established as of 2023 is 12, one more than reported in the first TVET Report.

The Commission, in collaboration with the SSBs, has developed one hundred and eight (108) CBT curricula at various levels on the NTVETQF. The current CBT programs as of December 2023 are one hundred and eight (108). An additional one hundred and fifteen (115) CBT curricula are under development.

One of the key reform agendas in the TVET landscape being spearheaded by CTVET is Greening Technical and Vocational Education and Training (TVET). Greening TVET emerges as a critical and pervasive subject essential for achieving long-term sustainable development goals.

We highlight the imperative role of financing in enhancing TVET delivery, acknowledging the persistent challenges faced globally and the specific hurdles encountered in Ghana's pursuit of positioning TVET as a focal point for growth in alignment with Sustainable Development Goals 4 and 8. Key financing strategies include government subventions, cost-sharing initiatives, support from development partners, internally generated funds derived from institutional production units and consultancy services, as well as collaborative funding initiatives with the private sector. These multifaceted approaches collectively play a significant role in elevating the standards of TVET.

The data reveal that learners from all ten technical universities have benefited from scholarship support provided by the GET Fund during the period spanning from 2021 to July 2023. Among these technical universities, Accra Technical University stands out with the highest number of scholarship recipients, totalling twenty-nine (29) learners across various courses. Kumasi Technical University is the second technical university with thirteen (13) learners awarded scholarships, while Takoradi Technical University has twelve (12) of its learners receiving this educational support. This distribution underscores the widespread impact of GET Fund scholarships, highlighting how learners across different technical universities in Ghana have been afforded financial assistance to pursue their education and training.

The data analysis indicates a notable gender disparity in the distribution of scholarships between 2021 and July 2023, with a higher percentage of male recipients (69%) compared to female recipients (31%). This trend is evident across various technical universities.

We acknowledge that an effective TVET system equips graduates with the necessary skills for today's job market while also preparing them to adapt to future skill demands. A robust TVET framework not only supports sustainable employment and productivity but also aligns with our nation's commitment to achieving the Sustainable Development Goals.

The Commission remains steadfast in its dedication to realizing the government's vision of making TVET aspirational and accessible to all. This includes promoting equity, ensuring sustainable financing, fostering environmental sustainability, upholding quality standards, and fostering inclusion within the TVET sector.

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LIST OF ACRONYMS AND ABBREVIATIONS

AGI	**Association Ghana Industries**
AI	**Artificial Intelligence**
AAMUSTED	**Akenten Appiah Menka University of Skills Training and Entrepreneurial Development**
BIBB	**German Federal Institute for Vocational Education and Training**
BMBF	**German Federal Ministry of Education and Research**
CBT	**Competency Based Training**
COTVET	**Council for Technical and Vocational Education and Training**
COVID-19	**Coronavirus Disease of 2019**
CPTC	**COTVET Preparatory Technical Committee**
CDVTI	**Community Development Vocational Technical Institute**
CSOs	**Civil Society Organizations**
CTVET	**Commission for Technical and Vocational Education and Training**
DANIDA	**Danish Development Cooperation Agency**
D.Tech	**Doctor of Technology**
ERBA	**Education Regulatory Bodies Act**
ERBB	**Education Regulatory Bodies Bill**
ESP	**Education Strategic Plan**
FEPTAG	**Federation of Professional Trade Associations of Ghana**
GES	**Ghana Education Service**
GEA	**Ghana Employers Association**
GOVET	**German Office for International Cooperation in Vocational Education & Training**
GDP	**Gross Domestic Product**
GIZ	**German Development Agency**
GTTC	**Government Technical Training Centre**
GTEC	**Ghana Tertiary Education Commission**
GRATIS	**Ghana Regional Appropriate Technology Industrial Service**
GNTDA	**Ghana National Tailors and Dressmakers Association**
GABSSO	**Ghana Association of Barbers & Barbering Salon Owners**

GHABA	**Ghana Hairdressers and Beauticians Association**
GNAG	**Ghana National Association of Garages**
GESTA	**Ghana Electronics Servicing Technicians Association**
HND	**Higher National Diploma**
ICCES	**Integrated Community Centres for Employable Skills**
ICT	**Information Communication Technology**
ILO	**International Labour Organization**
ITAC	**Industrial Training Advisory Committee**
JICA	**Japan International Cooperation Agency**
KPI	**Key Performance Indicators**
LI	**Legislative Instrument**
MoE	**Ministry of Education**
NC I	**National Certificate I**
NC II	**National Certificate II**
NDPC	**National Development Planning Commission**
NOS	**National Occupational Standards**
NTVETQF	**National TVET Qualification Framework**
NAHB	**National Association of Hairdressers and Beauticians**
NVTI	**National Vocational Technical Institution**
NGOs	**Non-Governmental Organizations**
NP I	**National Proficiency I**
NP II	**National Proficiency II**
OIC	**Opportunity Industrialization Centre**
OS	**Occupational Standards**
PEF	**Private Enterprise Federation**
PSED	**Programme for Sustainable Economic Development**
PPP	**Public Private Partnership**
PWD	**People With Disability**
TVET	**Technical Vocational Education and Training**
TVET CG&C	**TVET Career Guidance and Counselling**
TPs	**Training Providers**

QAC	**Quality Assurance Committee**
QA	**Quality Assurance**
RPL	**Recognition of Prior Learning**
SDF	**Skills Development Fund**
SSBs	**Sector Skills Bodies**
SPSS	**Statistical Package for the Social Sciences**
UN	**United Nations**
UNCRPD	**United Nations Convention on the Rights of Persons with Disabilities**
UNESCO	**United Nations Educational, Scientific and Cultural Organization**
UNDP	**United Nations Development Programme**
WB	**World Bank**
WEL	**Workplace Experience Learning**

CHAPTER ONE

BACKGROUND

1.0 INTRODUCTION

The Maiden Edition of the Ghana TVET Report was developed and published in 2021 by the Commission for TVET under the auspices of the Ministry of Education. The report gave an account of how TVET has evolved over the years until the establishment of the Commission for TVET in 2020. The report continues to serve as a pivotal source influencing significant policy choices within the education sector. Additionally, it offers valuable direction to the Commission when making decisions related to policies and regulations. The inaugural version of the Ghana TVET Report has proven invaluable by establishing a comprehensive data hub for the TVET sector in Ghana.

The Commission, in line with its mandate, has resolved to annually produce a consolidated report on the state of skill development in the country. Consistent with this, the Commission, with technical support from the German Federal Institute for Vocational Education and Training (BIBB), the German Office for International Cooperation in Vocational Education and Training (GOVET), and the United Nations Educational, Scientific and Cultural Organization (UNESCO) Ghana, has developed the second edition of the Ghana TVET Report. The project is part of the Ghana Germany Collaboration on a Joint Declaration of Intent (JDOI) signed between the Ministry of Education and the German Federal Ministry of Education and Research (BMBF) on 29th July 2019.

The report provides data on TVET governance, access, finance, quality, employment, international cooperation, and industry engagement. It also provides a spine for the development of programs and Policy formulation, as well as contributing to building a robust TVET system for Ghana's development.

1.1 Objectives

The second edition of the report seeks to achieve the following specific objectives:

a. To provide timely, reliable TVET data for effective policy planning and decision-making.

b. To inform all stakeholders about the developments in the TVET landscape.
c. To provide policy advice on the state of TVET to the Government.

1.2 Methodology and Scope of Report

The report adopted quantitative and qualitative research approaches. These approaches allow for a comprehensive understanding by combining existing information (secondary data) with new insights from respondents (primary data). Existing published and unpublished reports, including the first edition of the TVET report, were reviewed to draw lessons. Input received from stakeholders during the validation workshops was duly incorporated. Additionally, lessons from interactions with key actors in similar fields in different contexts (German VET reports) were valuable additions.

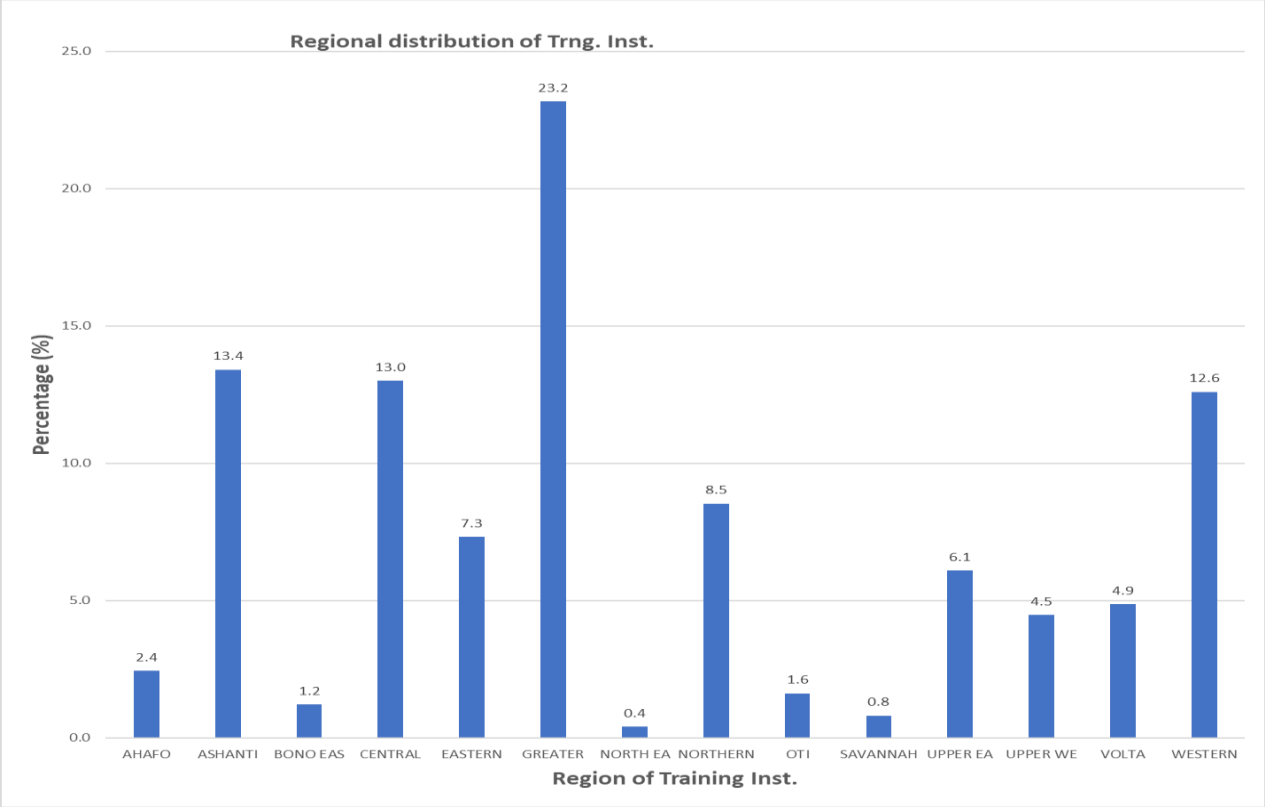
In collecting primary data, structured and semi-structured questionnaires were used to solicit responses because they allow for consistency while also providing space for detailed information. The use of both self-administered questionnaires and Excel templates for specific data types (for example, time-series data on students' enrolment) was a well-thought-out strategy to collect different kinds of information.

Prior to primary data collection, respondents were given virtual orientation on the self-administered questionnaires and their importance in ensuring data quality. The use of online forms (Google Forms) and the provision of Excel templates align with contemporary data collection practices. Assigning supervisors to zones to assist respondents and virtual follow-ups show a commitment to data quality and consistency.

In addition to the public and private training providers that participated in the survey, data were also collected from relevant Ministries, Departments, and Agencies. Other respondents that were purposively selected include Donor Partners, Industry Actors, and Employers' Associations. After collating the responses, the Excel dataset was extracted, refined, and imported into the Statistical Package for Social Sciences (SPSS) version 27 software to facilitate subsequent analysis. Thematic analysis was applied to examine responses to open-ended questions, while basic descriptive statistics and frequency tables were generated to conduct the analysis.

A total of 231 training providers (TPs) participated in the study, which translates to a response rate of 51.33%. The distribution of the respondents is presented in figure 1.1.

Figure 1.1 Regional Distribution of Respondents

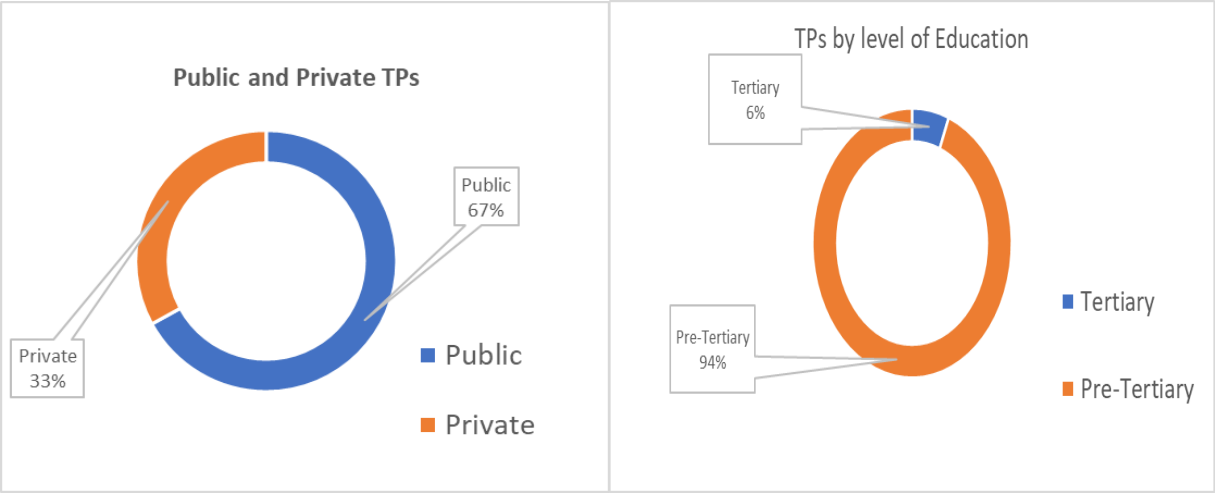


Source: CTVET Field Survey, 2022

The data shows that the majority of the respondents were from the Greater Accra Region (22.9%), partly because more than 30% of the TPs are located within the region. A similar reason goes for the Ashanti region (13%). The regions with the least response rate, Oti (1.3%), Savannah (0.9%), and North East (0.4%), also have the least number of Training Providers. This, in effect, reveals that the responses are consistent with the level of concentration of training providers in the region. Overall, responses were collected from all 16 regions in the country.

Figure 1.2 below illustrates the ownership status of training providers that participated in the study and the responses.

Figure 1.2: TPs that took part in the study



Source: CTVET Field Data, 2022

In terms of the distribution of TPs that took part in the survey, 33.3% are private training providers whereas 66.7% were public, which again is consistent with the ownership distribution of training providers. The response rates among public training providers have significantly improved compared to that of the previous year's report where 36.7% of the TPs were public and 63.3% were private. This provides a more realistic balance of the survey results. The increase in the number of public TP participation could be attributed to the quality of the information provided in the first report. The data revealed that 94% of the institutions that responded were at the pre-tertiary level. The data showed that all the 12 Technical Universities provided responses to the questionnaires.

The first draft of the report was subjected to team review for feedback, which was incorporated into the document and then validated by stakeholders.

1.3 Limitations

The major setbacks include the challenge in accessing labour market statistics and data, which limits the level of analysis expected for the TVET and employment chapter. Also, the non-availability of TVET MIS made it difficult to have access to a one-stop-shop data centre on the TVET sector.

1.4 Stakeholders that were engaged

In developing the report, the following key stakeholders were engaged during data collection, processing, and validation: Ministries and other public sector agencies, representatives from Sector Skills Bodies, Training Providers, Learners, Assessors, and Master Craft Persons; Trade Associations, Industry, and Development Partners among others.

1.5 Organization of the Report

The report is organized into eight chapters as follows. Chapter one outlines the background of the report, objectives, methodology used, and key stakeholders that took part in the study. Chapter two discusses the governance arrangement in TVET, while Chapter three looks at Access to TVET. Issues relating to inclusion in TVET are discussed in Chapter four, and Chapter five looks at Quality in TVET. Chapter six focuses on Industry engagement and Employability. Chapters seven, eight, and nine provide information on Greening TVET, TVET Finance, and International Cooperations, respectively.

CHAPTER TWO

TVET GOVERNANCE

2.0 INTRODUCTION

The First Edition of the Ghana TVET Report focused on TVET Governance in relation to the reforms in the TVET Landscape prior to the establishment of the Commission for TVET. This report, on the other hand, presents information on TVET Governance in relation to the governance arrangement after the establishment of the Commission in 2020.

The Ministry of Education is responsible for all forms of education in Ghana, and it is guided by the Education Strategic Plan (2018-2030), where more specifically, policy objective 3.3 focuses on TVET. The ESP 2018–2030 provides a 12-year roadmap for education development in Ghana, with specific delivery priorities and activities outlined in a series of five-year implementation plans aligned with the ESP.

To enhance the Government's commitment to revamp the TVET sector, the following strategies were adopted.

2.1 Appointment of a Deputy Minister In-Charge of TVET

The role of the Deputy Minister of Education for Technical and Vocational Education and Training (TVET) involves overseeing and managing the development and implementation of TVET policies, programs, initiatives, and interventions.

2.2 Establishment of TVET Agencies

TVET institutions are subject to national regulations and policies set by the Ministry of Education and relevant agencies. These entities provide oversight, guidance, and support to ensure compliance and quality, with key among them being:

i. Commission for TVET
ii. TVET Service
iii. AAMUSTED

2.2.1 The Commission for TVET

The Commission for Technical and Vocational Education and Training (CTVET) was established by an Act of Parliament in 2020 (Act 1023). The Act mandates the Commission to regulate, promote and administer technical and vocational education and training for transformation and innovation for sustainable development.

To achieve the objects of the Commission, the Commission shall:

1 (a) Formulate national policies for skills development across the broad spectrum of pre-tertiary and tertiary education, formal, informal, and alternative education.

(a) Co-ordinate, harmonize and supervise the activities of technical and vocational education and training institutions to meet the requirements of both the formal and informal sectors.

(b) Develop and implement a national assessment and certification system in the technical and vocational education and training sector.

(c) Take measures to ensure quality, equitable and inclusive access in the provision of technical and vocational education and training.

(d) Develop and maintain a national database on the technical and vocational education and training sector.

(e) Facilitate research and development in the technical and vocational education and training system;

(f) Source for funds to support technical and vocational education and training activities;

(g) Facilitate collaboration between training institutions and industry to promote industry-led and demand-driven curriculum development and placement.

(h) Workplace Experience Learning; and

(i) Recognition of prior Learning.

(j) Promote co-operation with international •agencies and development partners.

(k) issue annual reports on the state of skills development in the country.

(l) Advise the Minister on all matters related to the management and improvement of the technical and vocational education and training system.

(m) Coordinate and promote industry-led occupational standards generation for demand-driven curriculum development and delivery.

(n) Accredit programs, institutions, canters, facilitators, assessors and verifiers at the formal, informal, non-formal, technical and vocational education and training institutions to ensure quality delivery.

(o) Collaborate with tertiary institutions and relevant agencies to implement competency-based training programs on the National Technical and Vocational Education and Training Qualifications Framework; and

(p) Perform any other functions that are ancillary to the objects of the Commission.

(2) The Commission, in conjunction with Ghana Tertiary Education Commission shall accredit technical and Vocational Education and training programmes and institutions at the tertiary level

2.2.2 TVET Service

The TVET Service was established by an Act of Parliament Act 2020 (Act 1049) with a mandate to manage, oversee, and implement approved national policies and programs relating to pre-tertiary technical and vocational education and training.

To achieve the object of the Service, the Service shall

(a) Provide technical and vocational education and training service delivery at the pre-tertiary level.

(b) Implement the curriculum for Technical and Vocational Education and Training programs m collaboration with industry and the relevant regulatory bodies;

(c) keep an up-to-date register of technical and vocational education and training institutions and trainers in the Service.

(d) Provide recommendations for technical and vocational education and training policies and programs.

(e) Equip learners with relevant employable and entrepreneurial skills for the labour market.

(f) Facilitate practical workplace experience, learning and apprenticeships;

(g) Ensure equal emphasis on all sectors of technical and vocational education and training.

(h) Promote equity and inclusiveness in access and participation in technical and vocational education and training with special emphasis on gender and persons with disabilities.

(i) Determine the strategic direction of the Service.

(j) Ensure the effective and efficient management and administration of the finances of the service.

(k) Promote collaboration with regulatory bodies in education and other relevant national agencies.

(l) Ensure linkages with industry, both domestic and international.

(m) Advise the Minister on matters that will promote effective and efficient delivery of technical and vocational education and training in the country;

(n) Promote further education and training and lifelong learning.

(o) Set standards on matters of discipline for the staff of the Service.

(p) Be responsible for the management of the human resources of the Service; and

(q) Perform any other function that is necessary for the attainment of the object of the Service

The establishment of the TVET Service has brought closure to the issues relating to fragmentation and misalignment in the TVET landscape. Pre-tertiary level TVET institutions are owned and operated by either Public, Private or Faith-Based institutions.

2.2.3 The Akenten Appiah-Menka University for Skills Training and Entrepreneurial Development (AAMUSTED)

AAMUSTED was established under an Act of Parliament Act 2020 (Act 1026) with the aim to

(a) Provide higher education in technical, vocational and entrepreneurial training to develop skilled man power for job creation and economic development;

(b) Train and provide teachers with the relevant competence for teaching in technical and vocational education and training institutions; train and provide teachers with the relevant competence for teaching entrepreneurial development; and develop strong linkages between the University and (i) industry, or (ii) the community, to ensure the holistic training of teachers.

(c) The University shall, for the purpose of achieving the aims under subsection (1)

i) Determine the subjects to be taught at the University, placing emphasis on courses of special relevance to the needs of the technical and vocational education and training system for national development

ii) Promote the use of critical and practical tools including information and communication technology for teaching, research, dissemination of knowledge and administration

iii) Institute curricula within the context of learner-centred and problem-based learning techniques that are practical and relevant to technical and vocational education and training

iv) Promote the use of teaching and problem-solving methods that ensure critical and independent thinking

v) Undertake research in courses that are within the mandate of the University, but with special emphasis on;

(d) Matters that relate to technical and vocational education and training within and outside the country and

(i) Subjects that relate to technical and vocational education and training within and outside the country

(ii) Disseminate the results of research undertaken through the publication of books, journals, papers, and any other suitable means.

(iii) Provide extension and consultancy services in technical, vocational, and entrepreneurial education and training and related disciplines in higher education and

(iv) Promote entrepreneurial education using analytical and creative tools through research and training.

2.3 Governance structure at Training Institutions

The governance structure at Technical and Vocational Education and Training (TVET) institutions in Ghana consists of various organizational components that work together to manage and oversee the institution's operations, academic, and strategic direction. While the governance arrangements may vary with respect to the respective institutions, in terms of structure, all the training institutions have:

- **A Governing Board or Council:** This is the highest decision-making body within the institution. It is typically composed of representatives from various sectors, including

government, industry, academia, and community. The Governing Board is responsible for setting policies, approving budgets, and providing strategic guidance to the institution.

- **Head of the Institution (either a Principal or Vice Chancelor):** The Principal or Vice Chancelor is the chief executive officer of the institution. They are responsible for overall administration, academic leadership, and day-to-day operations. The Head of the Institution ensures that the institution's activities align with its mission, goals, and strategic plans.
- **Parents Teacher Association and School Management Committee:** This is the local governing body comprising of parents, teachers, and community/traditional leaders.
- **Academic Board:** This body is responsible for academic affairs, including curriculum development, program approval, and maintaining academic standards. It often includes department heads, faculty representatives, and other academic leaders.
- **Department Heads/Program Coordinators:** Department heads or program coordinators oversee specific academic departments or programs. They manage faculty, curriculum design, and program implementation within their respective areas.
- **Teaching and Non-Teaching Staff:** Faculty members are responsible for teaching, research, and mentoring students. Non-teaching staff members support administrative functions, student services, and facilities management.

The operational activities relating to school management, teaching, and learning, as well as teacher recruitment and deployment, are supervised by the TVET Service. The Commission for TVET, on the other hand, serves as the regulator in the TVET space.

CHAPTER THREE

ACCESS TO TVET

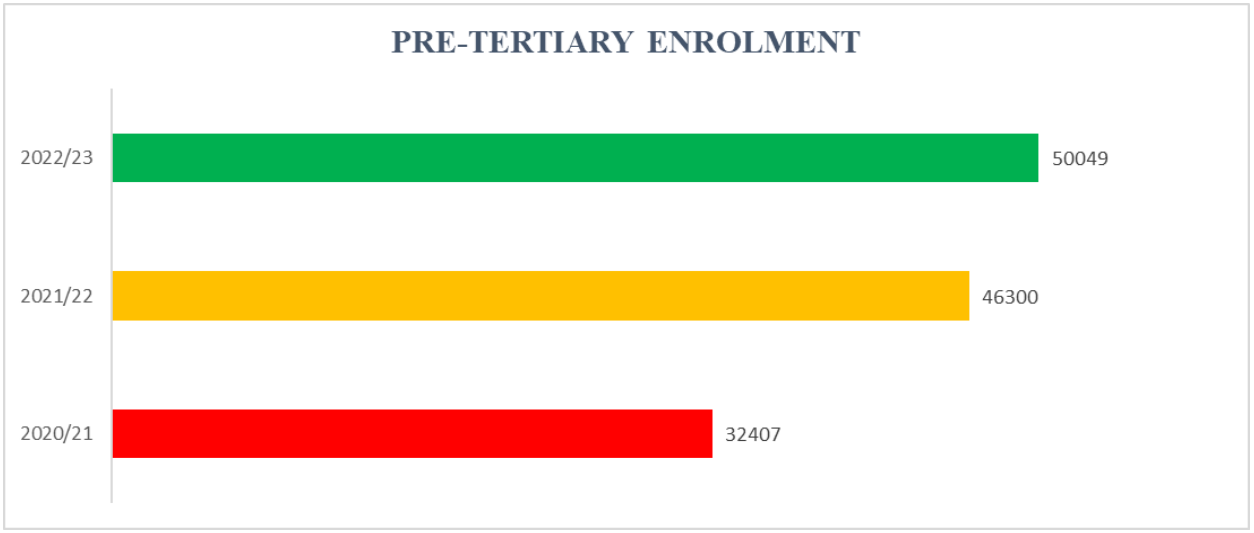
3.0 INTRODUCTION

This chapter focuses on equity and access to Technical and Vocational Education and Training (TVET) in Ghana at both the pre-tertiary and tertiary levels. It combines data on enrolments, TVET in the informal sector, and other topics related to access to TVET. The Sustainable Development Goal 4 (Quality Education) and the "Education 2030 Framework for Action" enforce principles to strengthen TVET systems in member states and improve youth employment, access to decent work, entrepreneurship, and lifelong learning opportunities in Ghana. The goal is to provide equal opportunities to all persons, including vulnerable and disadvantaged groups, to access quality teaching and learning towards skills development. The government of Ghana is committed to this goal and has implemented policy dialogue and programs in the TVET sector. The development and economic well-being of individuals, particularly the most vulnerable members of society, are heavily influenced by their ability to produce, which is largely possible with relevant skills.

3.1 Public Pre-Tertiary TVET Enrolment for 2020/2021 and 2021/2022 Academic Years

This section presents the pre-tertiary enrolment data for the 2020/21 and 2021/22 academic years.

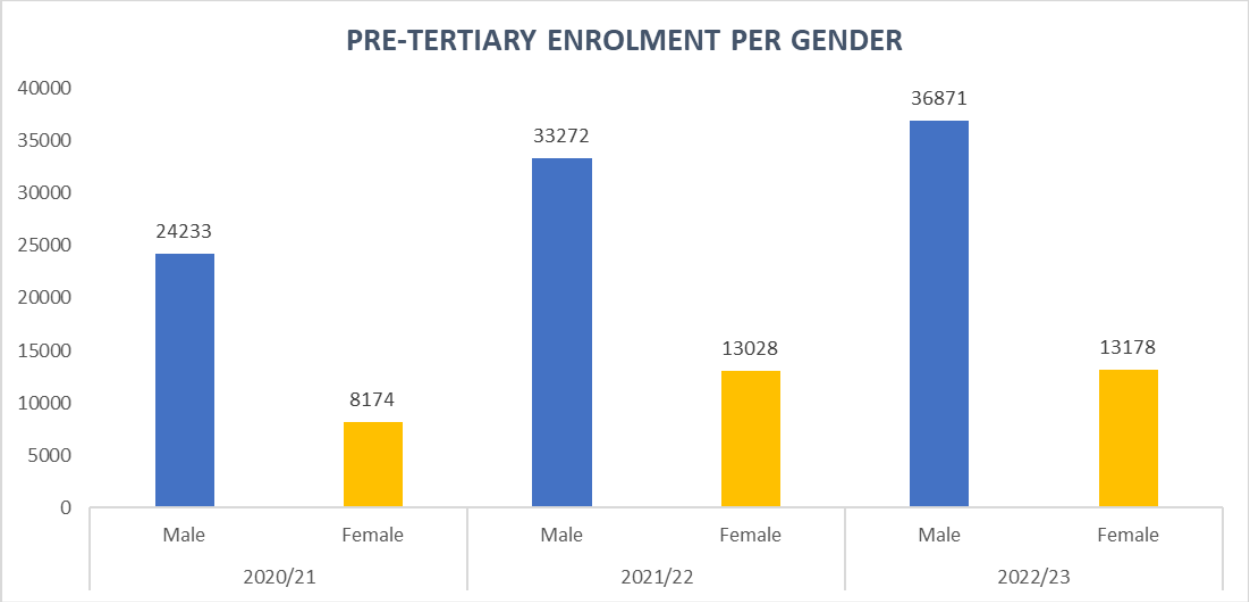
Figure 3.1: Pre-Tertiary Enrolment



Source: TVET Service database, 2023

Figure 3.1 shows that public pre-tertiary enrolment for the 2022/23 academic year was 54 % higher relative to 2020/21 academic year. The enrolment data shows enrolment in TVET institution has steadily increased from 2020/21 (32,407) to 46,300 in 2021/22 academic year. Again in 2022/23 the figures have increased to 50,049.

Figure 3.2: Pre-Tertiary Enrolment Per Gender



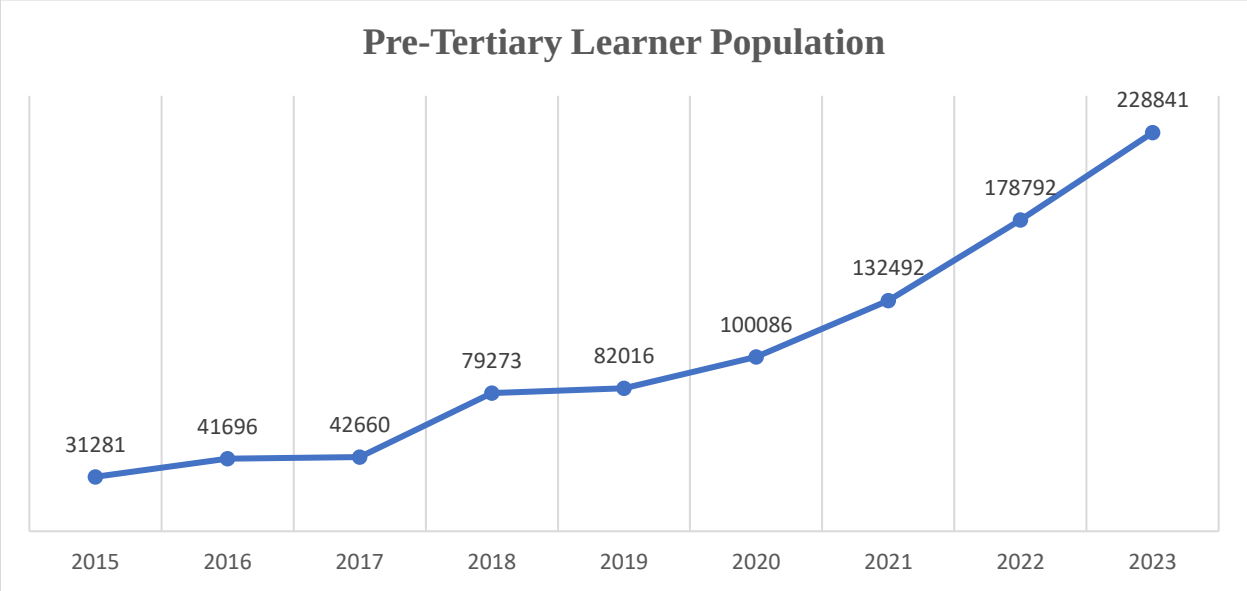
Source: TVET Service database, 2023

The 2020/21 academic year recorded 24,233 (74.78%) male learners and 8,174 (25.22%) female learners. In the 2021/22 academic year, enrolment showed 33,272 male learners and 13,028 female learners, representing 71.86% male learners and 28.14% female learners. The 2022/23 academic year enrolled 36,871 male learners, making up 73.67% of the year's total enrolment, with 13,178 female learners also enrolled.

3.2 Trend Analysis of Student population from 2015-2023

The data presented in Figure 3.3 offers a thorough analysis of the student population trend from year 1 to the final year at the pre-tertiary level spanning from 2015 to 2023, providing a comprehensive understanding of the changes during this period.

Figure 3.3: Pre-Tertiary Learner Population



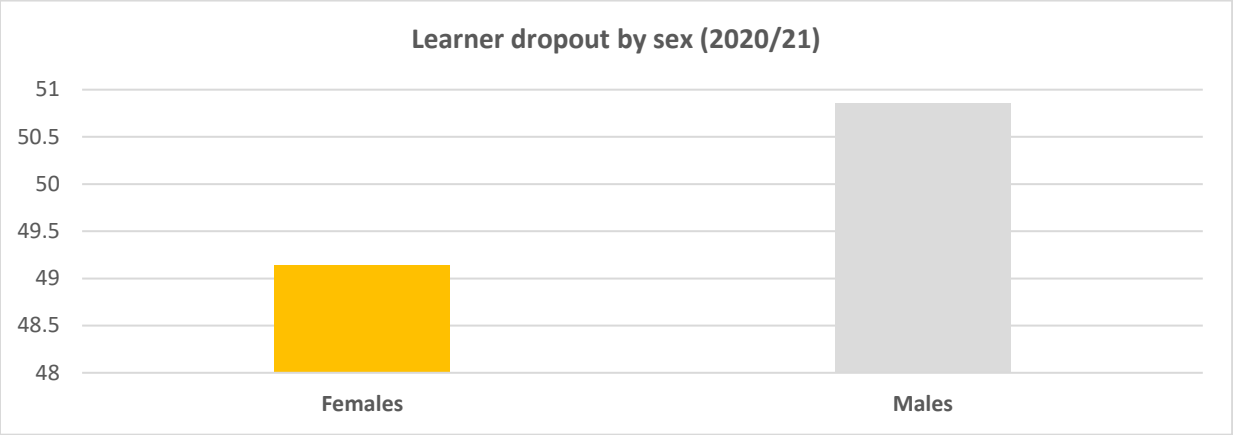
Source: TVET Service database, 2023

The consistent growth in the number of learners at the pre-tertiary level is apparent. While the increase in the learner population is not uniform, there is a positive trend observed. For instance, the population rose from 31,281 in 2015 to 41,696 in 2016, indicating steady progress.

3.3 Learner dropout

The TVET field study conducted among approximately half of the TPs revealed that in the 2020/21 academic year, 932 learners dropped out of school in the surveyed institutions. Out of this total, 458 learners, accounting for 49.14%, were females, while 474, representing 50.86% of the learners, were males. This indicates that more males than females dropped out of school within the reference period, as indicated in Figure 3.4.

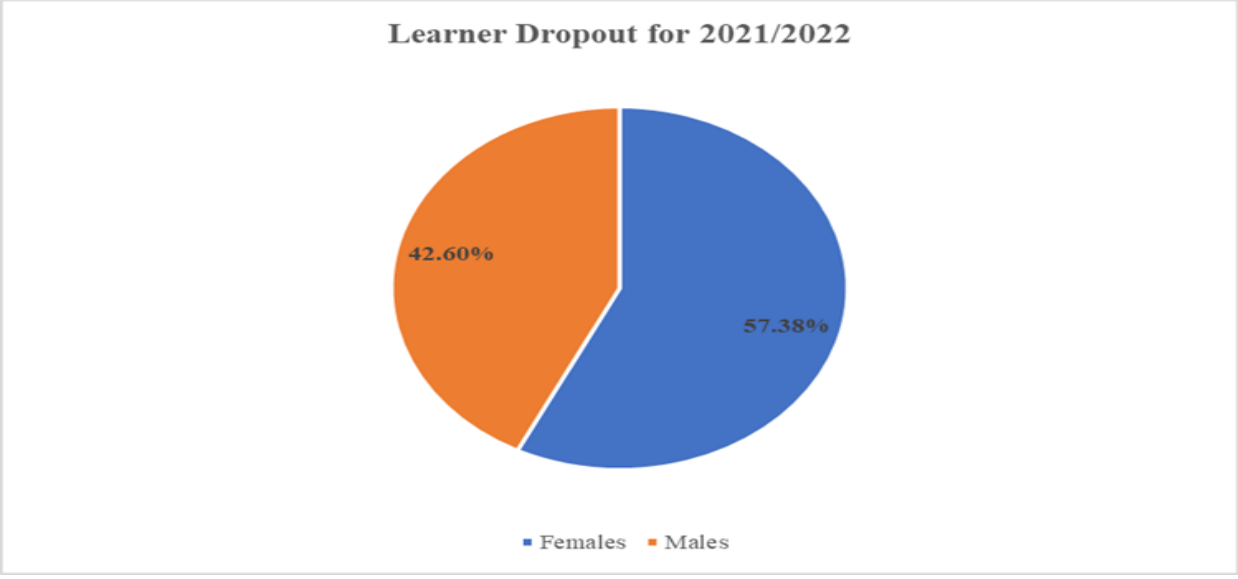
Figure 3.4: Leaner drop out (2020/2021)



Source: CTVET Field Survey, 2022

Data gathered for the 2021/2022 academic year (Figure 3.5) revealed a reduction in dropouts from 932 to 549, representing a rate of 41.1% reduction. This is partly due to the expansion of the Free TVET policy in 2021/22. This translates to 315 females, representing 57.3%, and 234 males, representing 42.6%. This indicates that the 2021/2022 academic year witnessed a decline in the dropout rate of learners. It is noteworthy that the majority of them were females compared to the 2020/2021 academic year, where more males than females dropped out..

Figure 3.5: Learner Dropout for 2021/22



Source: CTVET Field Survey, 2022.

Moreover, data collected for the 2021/2022 academic year (Figure 3.5) indicated a reduction in dropouts from 932 to 549, reflecting a reduction rate of 41.1%, partially attributed to the expansion of the Free TVET policy in 2021/22. This translates to 315 females, representing 57.3%, and 234 males, representing 42.6%. Consequently, the 2021/2022 academic year witnessed a decrease in dropout rates among learners. It is noteworthy that the majority of dropouts were females, contrasting with the trend observed in the 2020/2021 academic year, where more males than females dropped out.

Table 3.1 Reasons for learner dropouts

Reason	Frequency
Financial	53
Pregnancy	24
Family Demands	18
Lack of Interest	18
Change of Location	15
Health	7
Absenteeism	4
Transportation	3
Mining Activities	2
Death	2
Academic Competitiveness	2
Farm Work	1
Course &Work Schedule Clash	1
Infrastructural Problem	1
Lack of Equipment	1
Lack of Moral	1
Permission From MCP	1
No Workshop for Trade Areas	1
No Idea	76
Total	231

Source: CTVET Field Survey, 2022.

For 2022/2023, 231 learners dropped out of school. The reasons for the dropout are analysed in table 3.1. The data collected revealed that 53 respondents indicated that the learner dropout cases, were due to financial issues, this was followed by the issue of pregnancy which was 24. Some 18 respondents indicated that their family problems cause them to dropout and 18 also stated that the learners lacked interest in there are study. Only 15 respondents indicated that the dropout was because of proximity to their homes.

Despite the introduction of the Free TVET programme, funding still remains as an issue why learners dropout.

3.4 Interventions to improve Access to TVET at Pre-Tertiary Level

Interventions aimed at enhancing access to TVET at the pre-tertiary level includes measures implemented by the state to ensure that individuals of school-going age have equal opportunities. Among these interventions are Free TVET, The Ghana TVET Voucher Project (GTVP), the Ghana Education Outcome Project (GEOP), Recognition of Prior Learning (RPL), and Complementary Education.

3.4.1 Free TVET

The 1992 constitution supports the implementation of the Free Senior High School (SHS) Policy by the Government of Ghana. Article 25 (1) (b) of the 1992 Constitution stipulates that secondary education, including technical and vocational education, should be universally available and accessible through appropriate means, progressively introducing free education.

In line with this provision, the Government of Ghana, under President Nana Addo Danquah Akuffo Addo, enacted this constitutional mandate in 2017. Initially, 47 public TVET institutions were incorporated into the free SHS program, with additional institutions included later.

The Free TVET Policy aligns with Sustainable Development Goals (SDGs- 4) Target One, aiming for all boys and girls to complete free, equitable, and quality primary and secondary education by 2030. It emphasizes the accessibility and availability of vocational and technical education and training in all its forms.

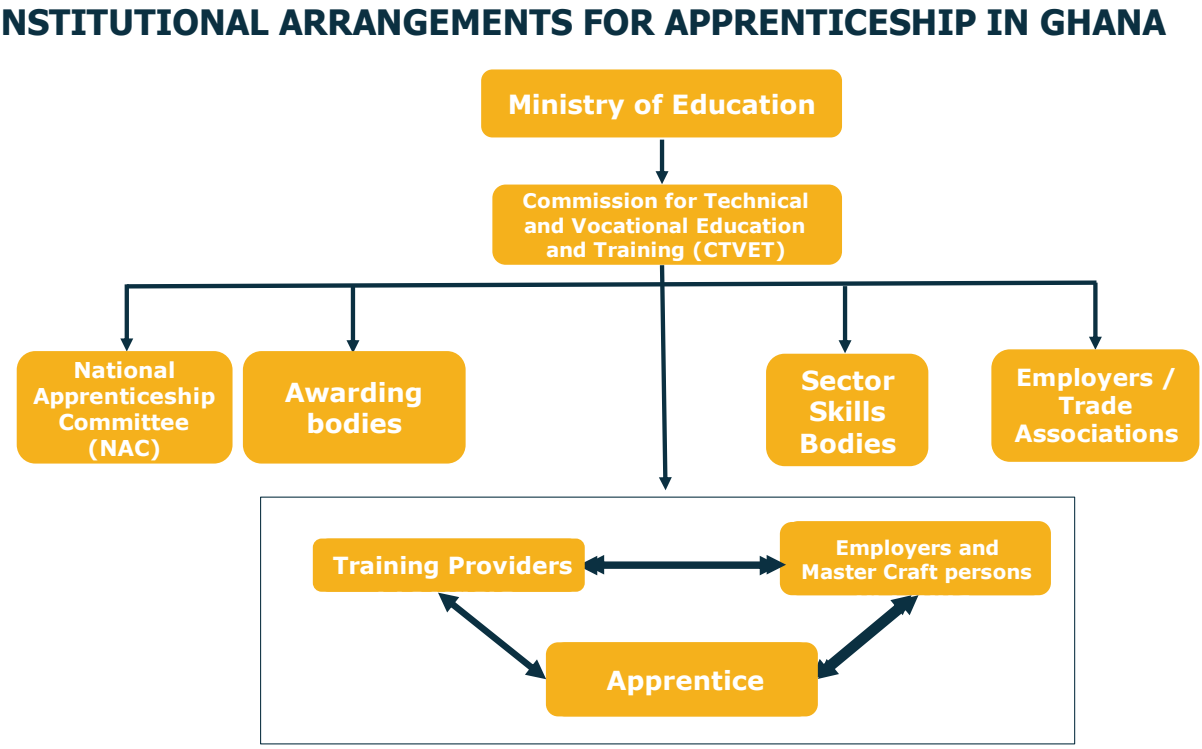
3.4.2 Number of Institution added onto the Computer Placement System

In 2022, 231 public Technical and Vocational Education and Training (TVET) Institutions in the country were rolled onto the Free TVET programme. This is to ensure that vocational education and training is made generally available and accessible to all, and no child is denied of his or her constitutional right to education.

3.5 TVET in the Informal Sector

This section details governmental measures aimed at enhancing access to high-quality Technical and Vocational Education and Training (TVET) within the informal sector. Conventional apprenticeship training stands out as a significant means of acquiring skills, particularly among youth as depicted in figure 3.**6**.

Figure 3.6: Institutional arrangements for apprenticeship in Ghana



Source: National Apprenticeship Policy, 2020

3.5.1 Expanding access to TVET in the informal sector

In ensuring access to quality training in the informal sector, measures put in place include;

i. enhancing training quality by upgrading and certifying master craftsperson,
ii. introducing a dual training system,
iii. blending on-the-job and classroom learning for trade-specific skills,
iv. certifying apprentice skills,
v. accrediting training providers,

This will ensure training meets set standards for apprentices, masters craft persons, and training providers. Interventions include the Ghana TVET Voucher Project (GTVP), the Ghana Jobs and Skills Project (GSDF), and the Ghana Education Outcomes Project (GEOP). This section elaborates on some interventions introduced by the government to increase access to quality TVET in Ghana. These interventions include the Ghana TVET voucher project (GTVP), the Ghana Jobs and Skills Project, and the Ghana Education Outcomes Project (GEOP).

3.6 The Ghana TVET Voucher Project (GTVP)

The GTVP, as launched in 2017, operates as a project under Ghana-German Financial Development Cooperation, funded by the KfW German Development Bank, and implemented by the Commission for Technical and Vocational Education and Training (CTVET).

The primary objective of the project is to promote access to quality TVET provision and enhance opportunities for decent employment. A total of 18,087 master craftsmen and apprentices have been trained and certified on the National TVET Qualification Framework, comprising 4,900 males and 13,122 females. This initiative has not only enhanced their industry-relevant skills, rendering them competitive and employable, but has also paved the way for career progression, thereby making TVET appealing to youth, parents, and guardians.

Following the conclusion of the first phase in 2022, there has been minimal growth in enrolment since then, as the second phase of the project is yet to commence.

The project offers training vouchers to CTVET-registered master craftsmen, their apprentices, and workers, with target groups encompassing owners of small and medium-scale enterprises within the informal sector, along with their employees and apprentices. Currently, the project is operational in nine trade areas, namely:

1. Beauty / Cosmetics (Cosmetology)
2. Consumer Electronics
3. Automotive repair
4. Building Construction (Welding)
5. Garment / tailoring/ dressmaking
6. Plumbing Furniture making
7. Electrical installation
8. Block laying and tiling
9. Catering and hospitality

The GTVP is operational in eleven (11) out of the sixteen (16) regions of Ghana. The beneficiary regions are: Greater Accra, Ashanti, Northern, Volta, Western, Central, Eastern, Western North, Savanna, Oti, and Northeast. The project is implemented in 160 centres involving 98 CTVET accredited training institutions.

3.7 Ghana Education Outcomes Project (GEOP)

The Ghana Education Outcomes Project (GEOP) is an intervention spanning from 2022 to 2026, with the objective of reintegrating out-of-school children (OOSC) into Ghana's formal education system and enhancing learning achievements in primary schools. Supported by The Global Partnership for Results-Based Approaches (GPRBA) through a grant from the Foreign, Commonwealth and Development Office of the UK, along with a contribution from the Government of Ghana, the project aims to focus on around 70,000 out-of-school children (OOSC) in regions experiencing the highest rates of absenteeism and dropouts. The program is designed to cater to children aged 8-16 years in rural areas, 8-18 years in urban areas, and those who have not completed the Basic Education Certificate Examination (BECE).

The project unfolds in two components. The first is the urban component, addressing out-of-school children in Greater Accra and Ashanti regions, while the second is the rural component, addressing out-of-school children in 27 selected districts across the country.

This three-year EU-funded project primarily focuses on fostering partnerships between civil society and local authorities to promote local job creation.

3.7.1 Project outcomes and successes

The project aims to enhance learning outcomes in schools, reintegrate and retain out-of-school children (OOSC), and impart entrepreneurial skills. Non-state actors collaborate with the Ghana Education Service and the Technical and Vocational Education and Training (TVET) Service to implement skills acquisition interventions. Enhancing educators' and facilitators' capabilities, developing resource-efficient techniques, and providing training to improve learning outcomes are key benefits. Various skill training initiatives have been accomplished, including bead-making, land tenure security training for selected groups, detergent (soap) making, hair conditioner production, and leather works (shoes and slippers), as well as welding, among others. Persons with Disabilities (PWDs) have also been included in skills training in some of these areas.

The Ghana Regional Appropriate Technology Industrial Service (GRATIS) has played a crucial role in advancing the strategic objectives of the Ghana Education Outcomes Project (GEOP). By emphasizing master craftsmen in designated areas and increasing public awareness of program opportunities, GRATIS has facilitated public engagement. The Ministry of Education/Ghana Education Service (MOE/GES) conducts regular monitoring and evaluation, including pre- and post-assessment procedures, to ensure project success and continuity.

3.8 Ghana Jobs and Skills Project (GJSP)

The Ghana Jobs and Skills Project is a World Bank-funded project to support the government of Ghana in the quest to provide and upgrade the skills of its populace through TVET. The GJSP's main objective is to support skills development and job creation in Ghana. The project is made up of five components and seven sub-components.

3.8.1 Component 1 – Provision of Apprenticeship Training for Jobs

Component 1 of the Ghana Skills Development Fund which is being implemented by the Commission for TVET focuses on apprenticeship training for jobs by:

i. Providing apprenticeship training through a blend of workplace-based learning by a skilled master and classroom training from an accredited institute, ensuring a formalized, standardized, and quality-assured system.
ii. Training master craftsmen for apprenticeship, registering public and private providers, ensuring competency-based training aligned with the country's framework and strengthening accrediting bodies for effective provider accreditation."

The target is to provide apprenticeship training for 25.000 people in different trade areas across the country.

3.8.2 Project Scope and Beneficiaries

The project is intended to be national, and the primary target groups for the project are:

(g) Individuals seeking skills and jobs

(h) Master craft persons

(i) Cooperatives and associations

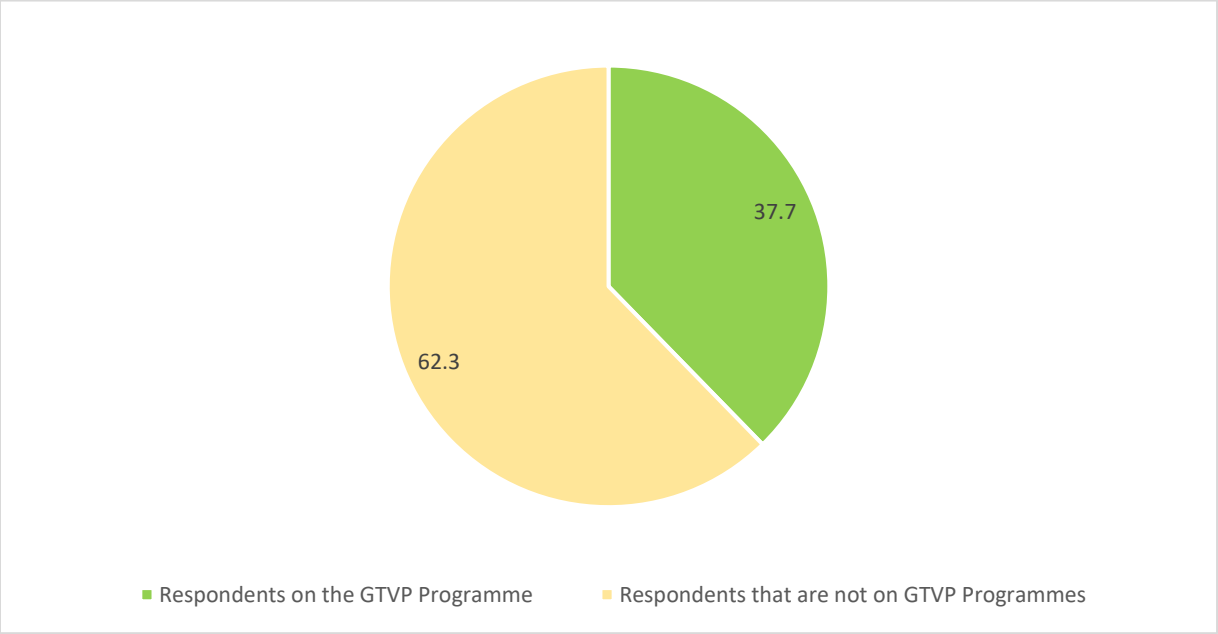
(j) Private enterprises and their workforces

(k) Public and private training providers

3.9 Accessing NTVETQF Through Apprenticeship

All accredited institutions on the GTVP programme admit learners at National Proficiency I and II on the National TVET Qualifications Framework. The figure 3.6 and 3.7 provides further details.

Figure 3.7: Institutions that admit learners on GTVP programme



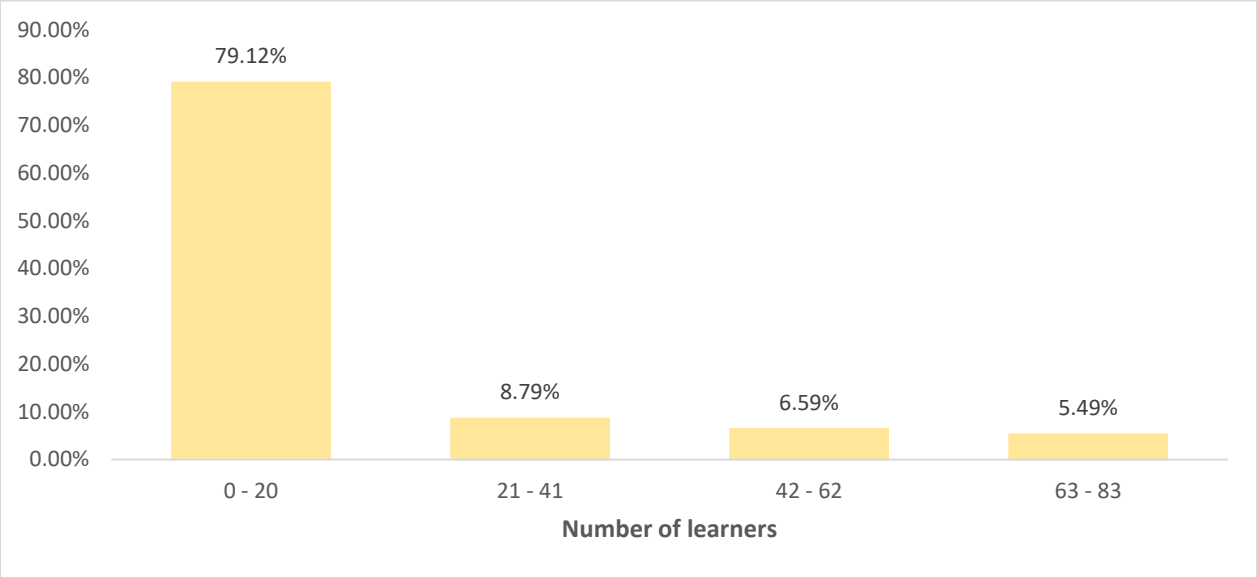
Source: CTVET Field data, 2022

From the above graph, training providers were asked whether they admit learners into NP I&II, out of a total of 231 training providers who participated in the survey, 87 representing 37.7% answered in affirmative. Whereas 144 representing 62.3% indicated that they do not admit learners into NP I & II. It is also creating a pathway for progression on the National TVET Qualification Framework.

3.10 Female learners admitted into NP I and II in 2021/22

Upon analysing the dataset to ascertain the proportion of females from the informal sector who have received certification according to the NTVETQF, several trends emerged. The data indicates that majority (79.12%) of the institutions have between 1 to 20 female learners certified whereas 8.79% of institutions have between 21-40 female learners certified. However, 5.49% of the respondents indicated that they have between 63 to 83 female learners in NP I&II certified.

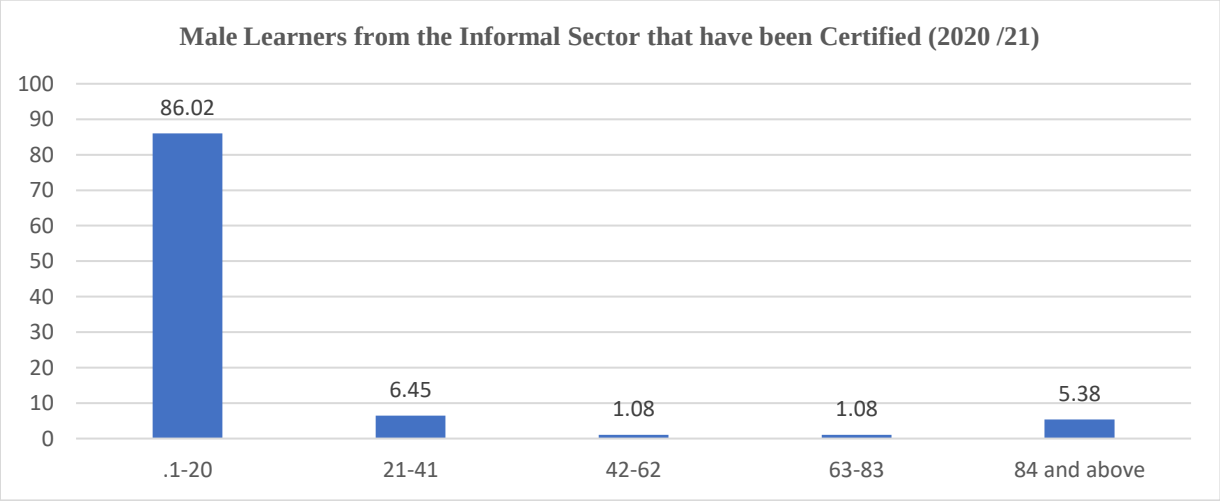
Figure 3.8. Number of female learners admitted from the informal sector in 2021/22



Source: CTVET Field Survey, 2022.

The survey result shows that nearly all institutions have admitted female learners from the informal sector.

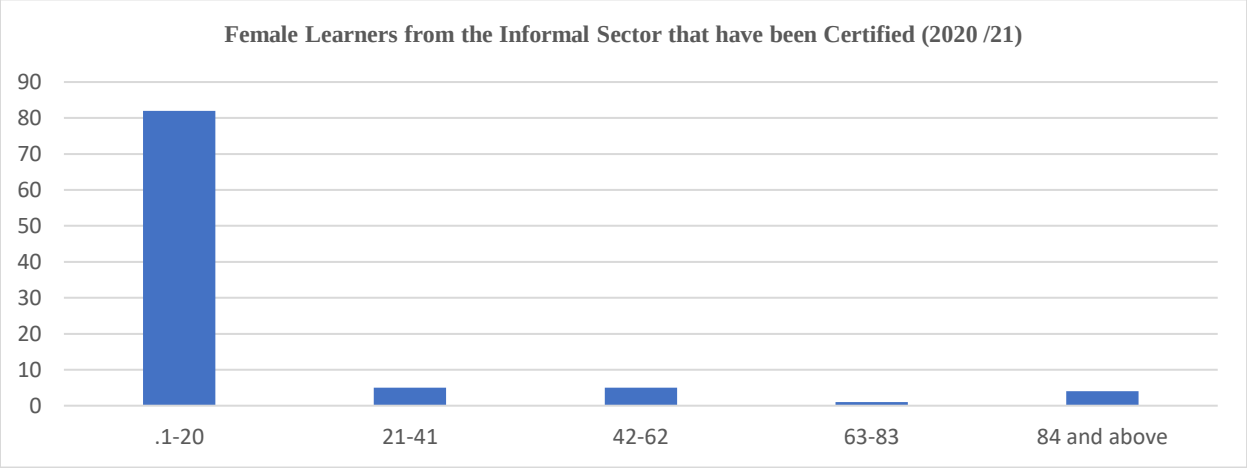
Figure 3.9. Number of male learners from the informal sector that have been certified



Source: CTVET Field Survey, 2022.

The above graph shows the total percentages of male learners from the informal sector that were certified according to NTVETQF in the 2020/2021 academic year. The majority of the respondent's 86.02 percent indicated they have certified between 0-20 male learners from the informal sector (Apprentices and master craft persons). From the data it can be observed that 6.45 percent certified between 21 - 41 male learners in the 2020/2021 academic year. This is followed by 5.38 percent of the institutions that indicated that they have certified 84 and above learners.

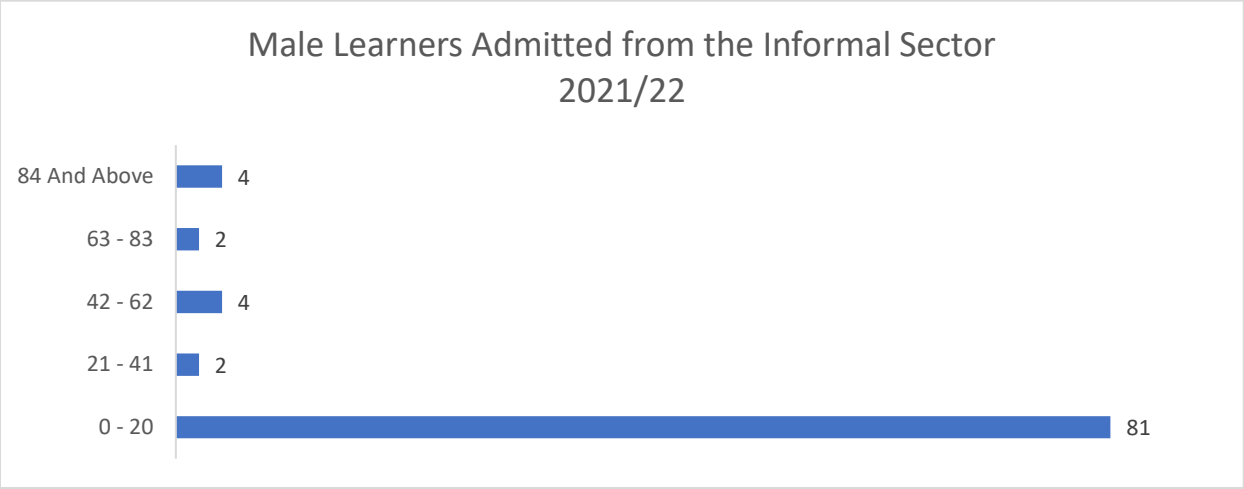
Figure 3.10: Number of female learners from the informal sector that have been certified (2020/21)



Source: CTVET Field Survey, 2022.

Out of the 231 Training Providers (TPs) that participated in the survey, 84 percent institutions indicated that they certified between 0 -20 female learners from the informal sector in the 2021 / 22 academic year. This is followed by 5 percent of the institutions also certifying between 21 – 42 female learners, another 5 percent stated they certified 42 – 62 of learners. Whereas the remaining 1 percent and 4 percent of the institutions also certified between 63 - 83 and 84 and above respectively for female learners from the informal sector in the 2021/ 22 academic year.

Figure 3.11: Male Learners Admitted from the Informal Sector in 2021/22



Source: CTVET Field Survey, 2022.

The graph above represents the total of male learners from the informal sector that have been certified according to the NTVETQF in the 2021/2022 academic year. From the total respondents, 87 percent indicated they have certified 0 – 20 male learners, 2 percent have certified 21 – 41, followed by 4 percent institutions that have certified 42 – 62, whereas 2 percent have certified 63 – 83 male learners. Finally, 4 percent indicated they have certified 84 and above.

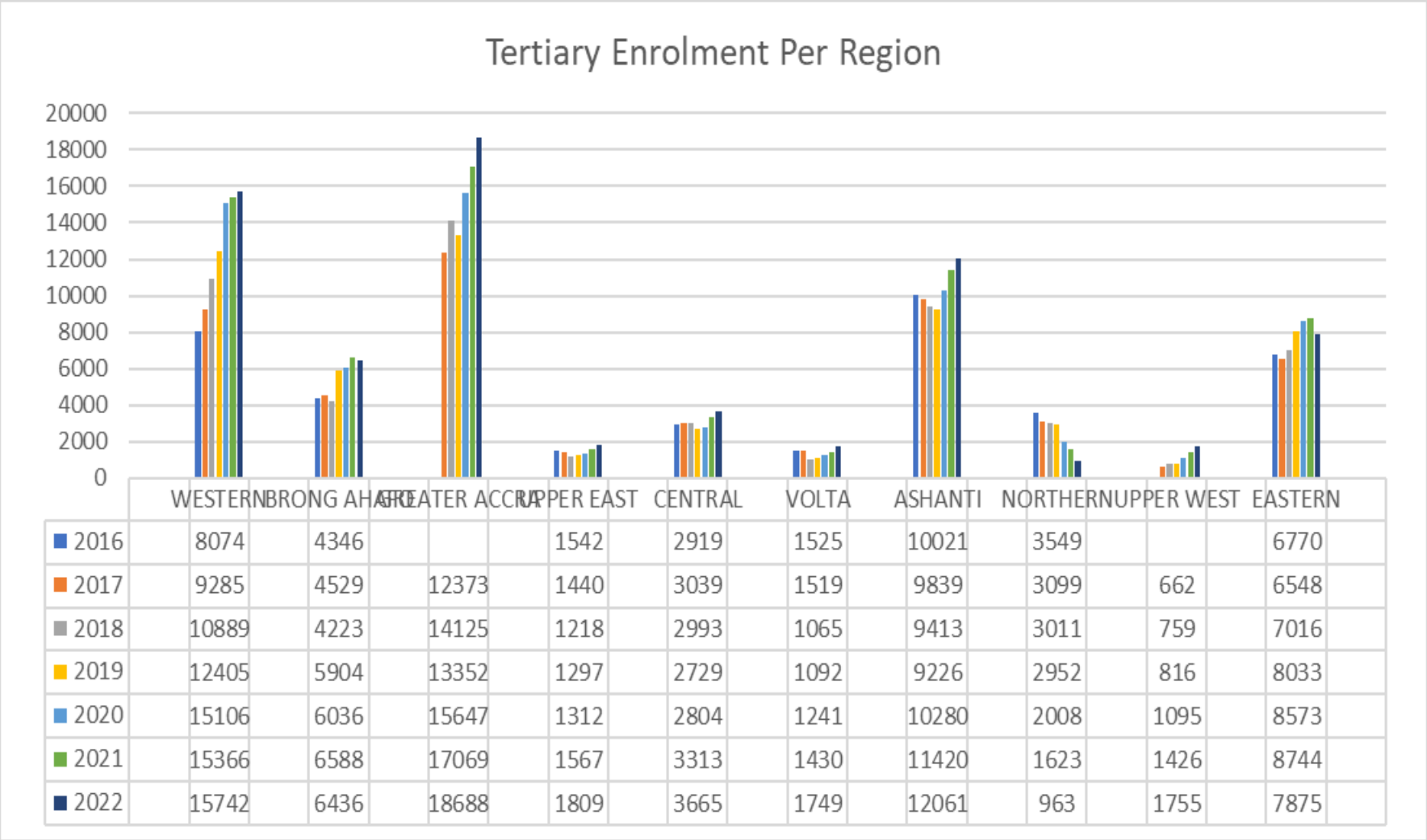
3.11 TVET providers at the tertiary level

At the tertiary level, Technical and Vocational Education and Training providers cover a range of sectors, with different categories of providers specializing in specific areas. The only exception is the Technical Universities, which offer disciplines across multiple sectors. The table provided below outlines the various tertiary TVET providers.

3.12 Enrolment for Technical Universities in Ghana

The figure below presents information on the tertiary enrolment from 2016 to 2022 academic years for all tertiary TVET providers in Ghana.

Figure 3.12: Tertiary enrolment per region



	WESTERN	BRONG AHAFO	GREATER ACCRA	UPPER EAST	CENTRAL	VOLTA	ASHANTI	NORTHERN	UPPER WEST	EASTERN
2016	8074	4346		1542	2919	1525	10021	3549		6770
2017	9285	4529	12373	1440	3039	1519	9839	3099	662	6548
2018	10889	4223	14125	1218	2993	1065	9413	3011	759	7016
2019	12405	5904	13352	1297	2729	1092	9226	2952	816	8033
2020	15106	6036	15647	1312	2804	1241	10280	2008	1095	8573
2021	15366	6588	17069	1567	3313	1430	11420	1623	1426	8744
2022	15742	6436	18688	1809	3665	1749	12061	963	1755	7875

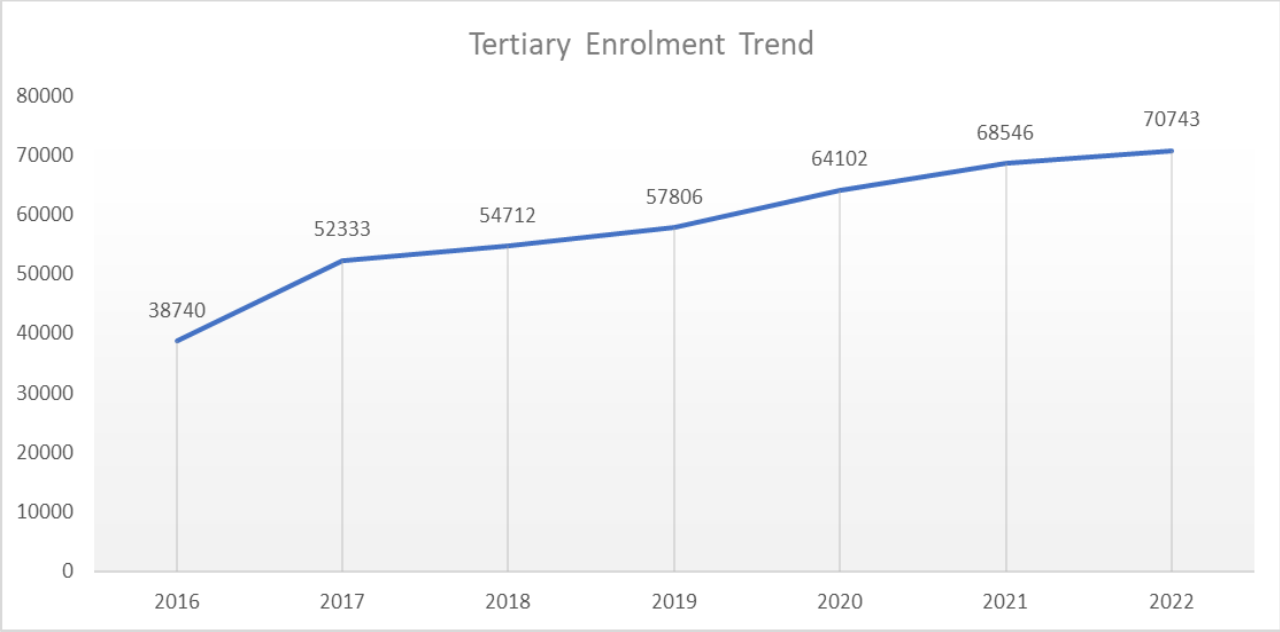
Source: Technical Universities Reported Data, 2023

The tertiary enrolment covers the ten public TVET institutions (Technical Universities) in Ghana, generally, most of the institutions recorded a steady rise in enrolment from 2016 to 2022. Few institutions recorded decreases. Ashanti region recorded the highest enrolment, which is 10,021 in 2016, followed by Western, and Volta recorded the lowest enrolment for that year. In 2022, Greater Accra recorded the highest (18,688) enrolment, with Western (15,742) following. The Northern region recorded the lowest enrolment for the 2022 academic year. Further investigation into the reasons for this is recommended.

3.13 Enrolment Trend in the Technical Universities

The path taken by the ten tertiary TVET institutions recorded are depicted in the diagram below.

Figure 3.13: Enrolment trend in tertiary institutions



Source: Technical Universities Reported Data, 2023

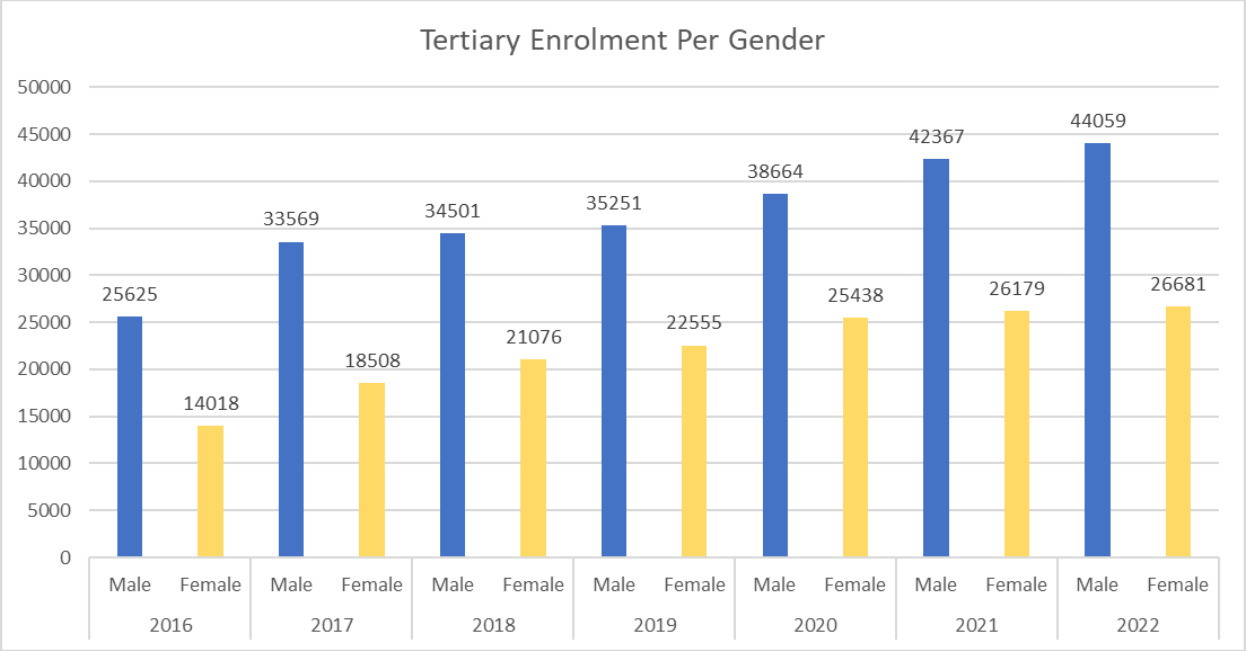
Enrolment figures in the Technical Universities showed a consistent year-on-year increase from 2016 to 2022. Initially, there was a 35.08% surge in enrolment from 2016 to 2017. Subsequent years saw slight variations: a 4.55% increase from 2017 to 2018, followed by a 5.66% rise from 2018 to 2019, a 10.89% increase from 2019 to 2020, a 6.93% increase from 2020 to 2021, and

finally, a 3.21% increase from 2021 to 2022. This consistent upward trend in enrolment reflects a significant interest in acquiring technical education.

3.13.1 Gender Enrolment in Technical Universities

The chart below shows the enrolment figures for the tertiary TVET institutions per gender.

Figure 3.14: Tertiary enrolment by gender



Source: Technical Universities Reported Data, 2023

Tertiary enrolment per gender demonstrates a consistent rise in enrolment for both male and female learners from 2016 to 2022. Overall, female enrolment surged by 90% during this period, while male enrolment saw a 71.94% increase from 2016 to 2022.

CHAPTER FOUR

INCLUSION IN TVET

4.0 INTRODUCTION

This chapter explores the education and training of individuals with special needs, particularly People with Disabilities (PWDs), within Technical and Vocational Education and Training (TVET) institutions in Ghana. It assesses the types of Learners with Special Needs (LWSNs) present in both public and private TVET institutions, their support structures, and their adaptation to training.

The global conversation has increasingly emphasized inclusion across various spheres, including education and the economy. Policy interventions and programs led by governments, international organizations, and NGOs aim to combat marginalization, guided by the United Nations' Sustainable Development Goals (SDGs). At the core of these goals lies the principle of "Leave No One Behind (LNOB)," ensuring the inclusion of diverse populations.

In understanding this concept, factors such as discrimination, place of residence, socio-economic status, governance, and vulnerability to shocks, as outlined by the UN, are taken into account. Efforts to implement the LNOB commitment involve identifying marginalized groups, addressing underlying causes, monitoring progress, and ensuring accountability.

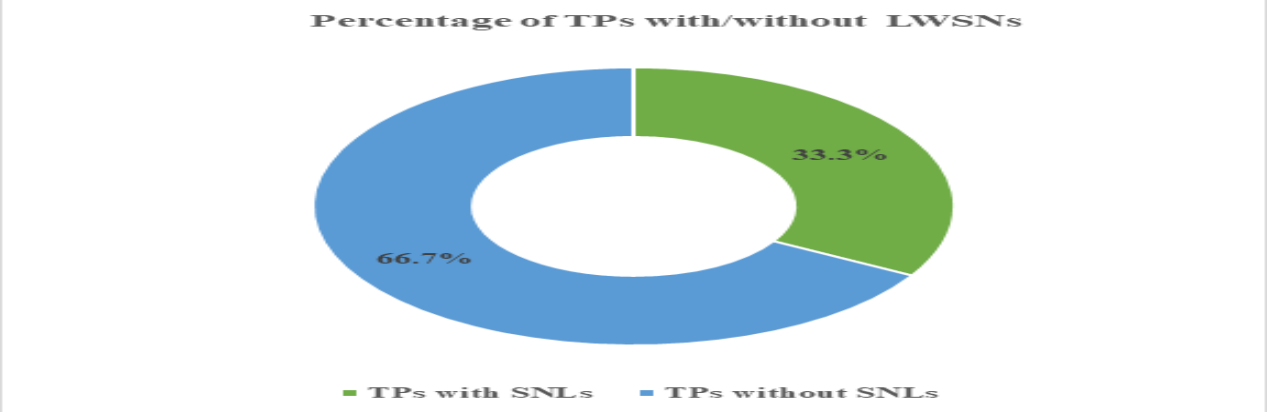
In Ghana, the population of Persons with Disabilities (PWDs) has seen a significant increase, comprising 8% of the total population, as per the 2021 Census. Initiatives to address inequalities and empower PWDs include legislative measures like the Persons with Disability Act, 2006 (Act 715), and initiatives such as the Free TVET Policy, alongside allocations from the District Assembly Common Fund.

Infrastructure development within the TVET sector aims to enhance accessibility, particularly for PWDs. The Persons with Disability Act, 2006, mandates accessibility in public spaces and services. Furthermore, the Act emphasizes educational opportunities for PWDs, including provisions for free education, the establishment of special schools, and the integration of special education into curricula.

4.1 Institutions with/without Learners with Special Needs (LWSNs)

The study assessed the presence of Assistive Devices for Learners with Special Needs (LWSNs) in Technical and Vocational Institutions (TVIs). Various devices, such as Mobility aids, Visual aids, and Computer software and hardware, were considered.

Figure 4.1: Training Providers with LWSNs

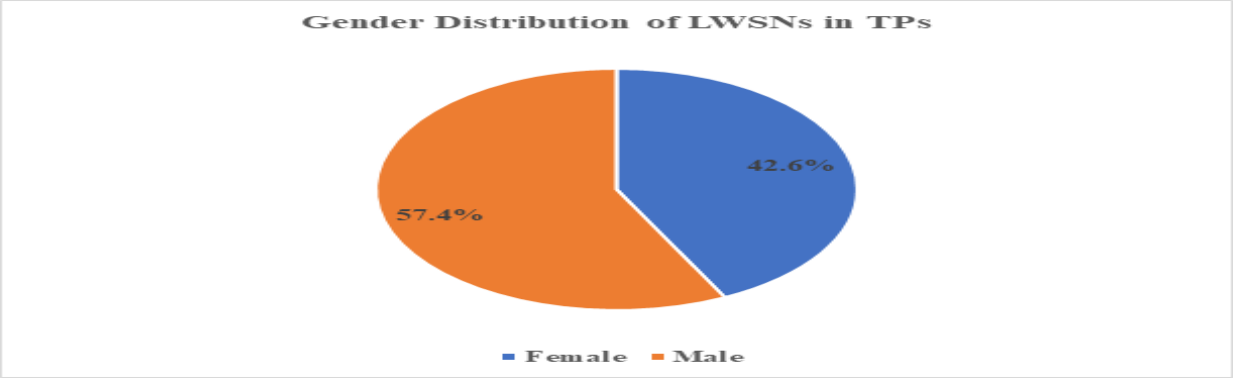


Source: CTVET Field Survey, 2022

4.2 Gender Distribution of Learners with Special Needs (LWSNs) in TVIs

The data among the 231 TVIs revealed that a total of 357 LWSNs have been enrolled in the 77 institutions at the time of the survey. Out of that, a total of 205 were males and 152 were females representing 57.4 % and 42.6 % respectively. The data on gender distribution of LWSNs is presented in figure 4.2.

Figure 4.2: Gender Distribution of LWSNs



Source: CTVET Field Survey, 2022

4.3 Types of Learners with Special Needs (LWSNs) in TPs

The survey investigated the types of Learners with Special Needs (LWSNs) enrolled in the Technical Providers (TPs). Various categories of special needs were examined, including Physical Disorders, Mental Disorders, Visual Impairments, and Hearing Impairments, among others. The data revealed that a higher number of reported cases pertained to Physical Disorders compared to reported cases of Mental, Visual, Hearing, Speech, and Learning Disorders. Details regarding the number of institutions reporting each of the aforementioned conditions are outlined in Table 4.1.

Table 4.1: Categories of Special Needs among LWSNs in TVIs

S/N	Number of Institutions	Categories of special needs
1.	46	Physical Disorder
2.	27	Hearing Impairment
3.	18	Mental Disorder
4.	12	Visual Impairment
5.	8	Learning Disorder
6.	8	Speech Disorder
7.	5	Others (Autism, Behavioural, Stroke, Hydrocephalus)
Note: multiple selections allowed. (N=77)		

Source: CTVET Field Survey, 2022

Comparison to the first survey, conducted in 2021 with a smaller sample (see first TVET Report 2021), is difficult as the categories were changed to allow better grouping.

4.4 Programme of Study by Learners with Special Needs (LWSNs) in TVIs

The study shows that LWSNs have been enrolled in almost all programmes. Fashion Design and Technology has the highest number of LWSNs (25), Building and Construction has seven (7) and six (6) were enrolled in Information Technology. Details of the number of institutions that have enrolled LWSNs in various programmes are provided in table 4.2.

Table 4.2: Number of Institutions that have enrolled LWSNs in various Programmes.

S/N	Number of Institutions	Programmes LWSNs are enrolled in	Number of Institutions	Programmes LWSNs are enrolled in
1	25	Fashion Design and Technology	1	Architectural Drafting
2	7	Building and Construction	1	Forklift Operation
3	6	Electricals	1	Garment Making
4	6	Information Technology	1	Painting
5	5	Catering and Hospitality	1	Interior Design
6	4	Dress Making	1	Hairdressing
7	4	Accounting	1	Mushroom Production
8	4	Catering	1	Shoemaking
9	4	Business Secretarial	1	Gas Fitting Technology
1	3	Welding and Fabrication	1	Agriculture
1	3	Computer Hardware	1	Auto body Technology
1	3	Cosmetology	1	Motor Vehicle Engineering
1	3	Electronics	1	Beauty Therapy
1	3	General Textiles	1	Building Draftsmanship
1	3	Plumbing	1	Business Information Technology
1	2	Leatherwork	1	Carpentry
1	2	Hand weaving	1	Printing Technology
1	2	Graphic Design	1	Creative Arts
1	2	Wood Construction Technology	1	Automotive Engineering

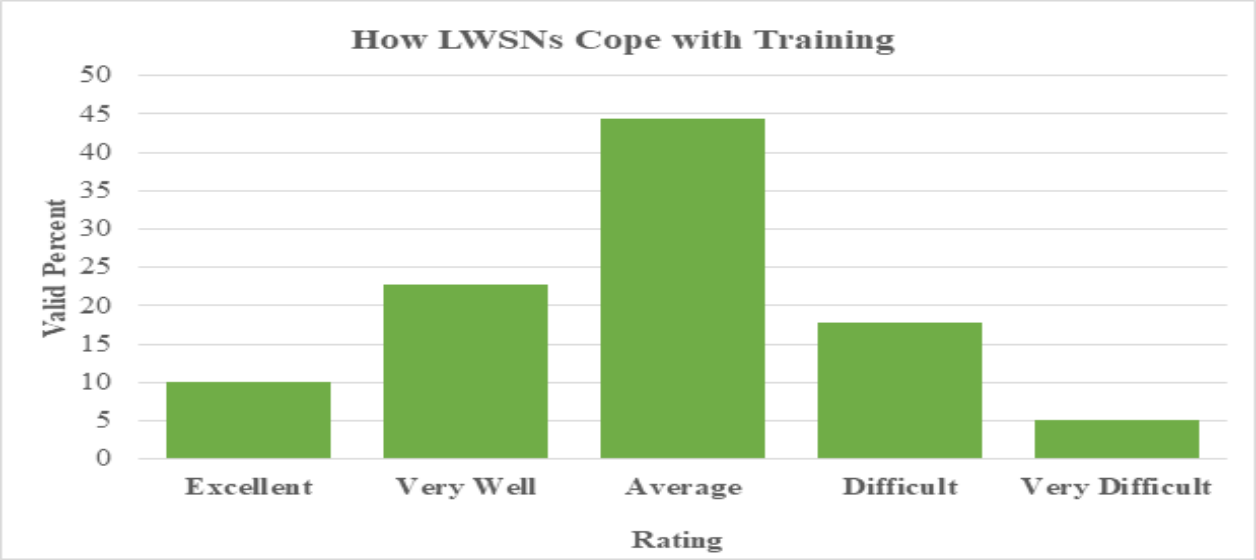
Note: multiple selections allowed. (N=77)

Source: CTVET Field Study, 2022

4.5 Responsiveness of LWSNs to Training

The survey also investigated the responsiveness of LWSNs to training. A five-point Likert scale was used to measure how LWSNs cope with training. Thirty-five of the institutions with LWSNs (44.3 %) indicated that LWSNs averagely cope with training. Eight institutions representing 10.1% indicated that LWSNs are coping excellently with training whereas four institutions (5.1 %) said training is very difficult for the LWSNs. The data reveals that People with Special Needs in the TVIs sampled are doing relatively well in TVET. Details of the ratings are given in figure 4.3.

Figure 4.3: LWSNs Responsiveness to Training

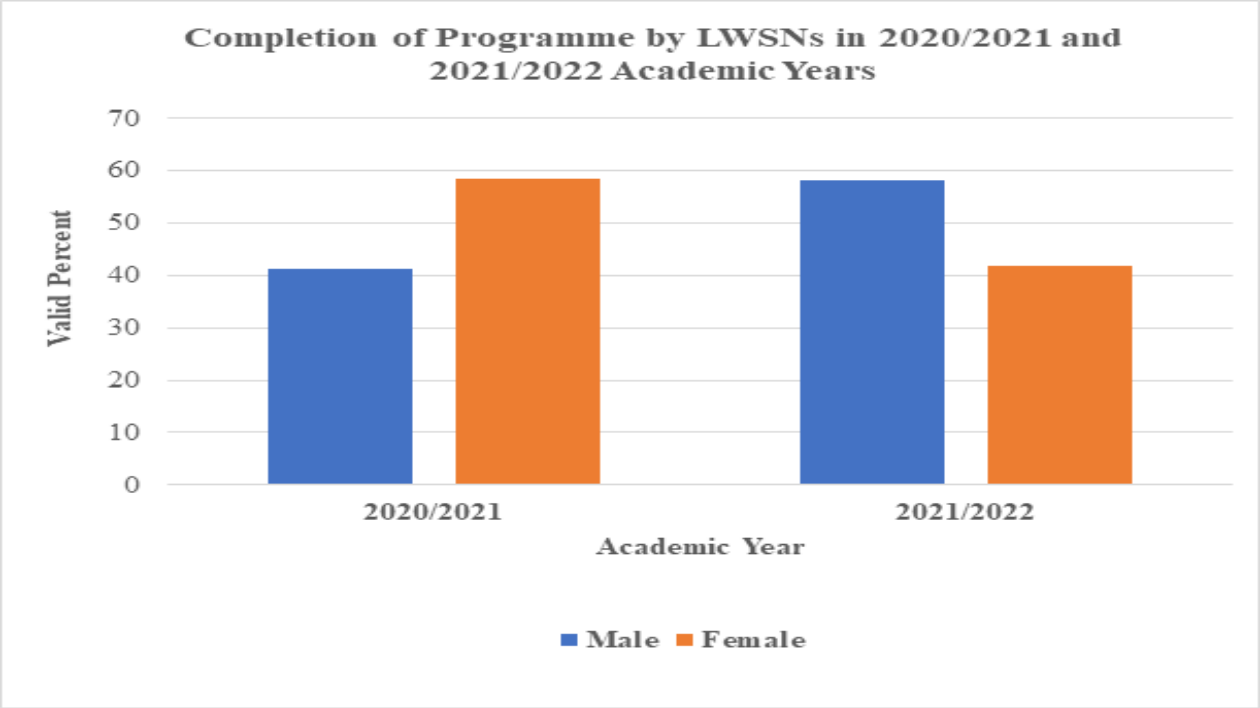


Source: CTVET Field Study, 2022

4.6 Completion of programme by LWSNs

The study collected data on the completion of programs by Learners with Special Needs (LWSNs) in various TVIs across the country over the past two academic years. Approximately 18 of the TPs surveyed graduated LWSNs in the 2020/2021 academic year, while 25 TPs graduated LWSNs in the 2021/2022 academic year. In the 2020/2021 academic year, a total of 70 LWSNs graduated, comprising 29 males (41.4%) and 41 females (58.6%). The number of graduates increased to 79 in the following year, resulting in 46 males (58.2%) and 33 females (41.8%). Although the number of LWSNs graduating in the 2021/2022 academic year increased, this increase was only reflected in males, with an increment from 41.4% to 58.6%. Conversely, the percentage of female graduates dropped from 58.6% to 41.8%. The data on LWSNs graduating for the two academic years are presented in Fig. 4.4 below.

Figure 4.4: Completion of Programme by LWSNs in 2020/2021 and 2021/2022 Academic Years

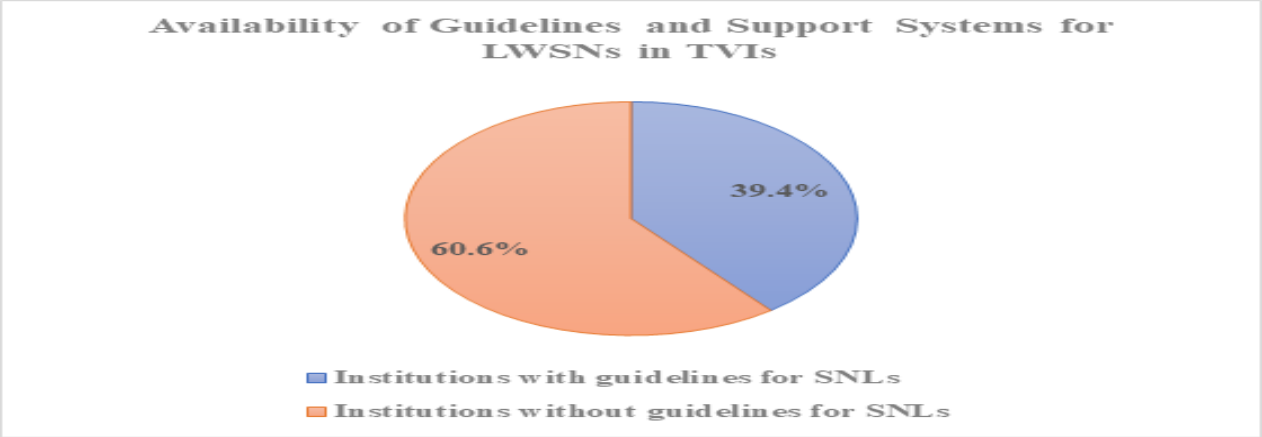


Source: CTVET Field Study, 2022

4.7 Institutions with Guidelines and Support Systems for Learners with Special Needs (LWSNs)

The study examined the availability of guidelines and support systems for Learners with Special Needs (LWSNs) in various TVIs across the country. Several guidelines were considered, including the Persons with Disability Act, Institutional Policies, Inclusive Programs, Guidance and Counselling, among others. The data reveals that 91 of the institutions (39.4%) that participated in the study have at least one set of guidelines and/or support system for LWSNs. The remaining 140 (60.6%) institutions indicated that they do not have any set of guidelines or support systems in place for LWSNs. The data on the existence of guidelines for LWSNs is presented in Fig. 4.5. Further details are provided in Table 4.3.

Figure 4.5: Availability of guidelines for LWSNs in TVIs



Source: CTVET Field Study, 2022

Table 4.3: Set of Guidelines and Support Systems for LWSNs

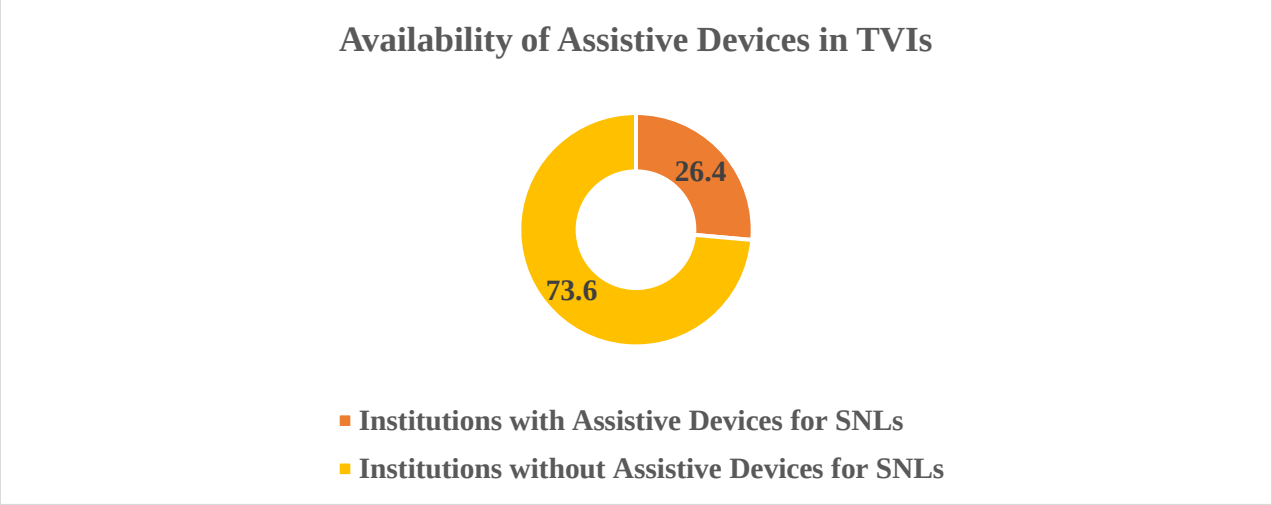
S/N	Number of Institutions	Guidelines and Support Systems for LWSNs
1.	62	Guidance and Counselling
2.	46	Institutional Policies
3.	34	Inclusive Programmes
4.	22	Persons with Disability Act, 2006 (Act 715)
5.	19	Resource Materials
6.	8	Medical Services
7.	6	Physical and Occupational Therapy
8.	3	Speech Therapy
9.	1	Social support for Learners
10.	1	Assisted Learning
11.	1	Financial Support
12.	1	Improvisation of Teaching Methods to suit their needs
13.	1	Friendly Environment
14.	1	Equality Policy
Note: Multiple selection allowed (N=91)		

Source: CTVET Field Study, 2022

4.8 Availability of Assistive Devices for Learners with Special Needs (LWSNs)

Out of the 231 surveyed institutions, 61 (26.4%) reported having some form of assistive devices, with a focus on mobility aids and computer technology. The majority of these institutions also ensured accessibility for LWSNs. Conversely, 170 (73.6%) institutions indicated a lack of assistive devices. Details regarding the availability of Assistive Devices in TVIs are depicted in the figure below, with additional information provided in figure 4.6.

Figure 4.6: Availability of Assistive Devices in TVIs for LWSNs



Source: CTVET Field Study, 2022

Table 4.4: Assistive Devices in place for LWSNs

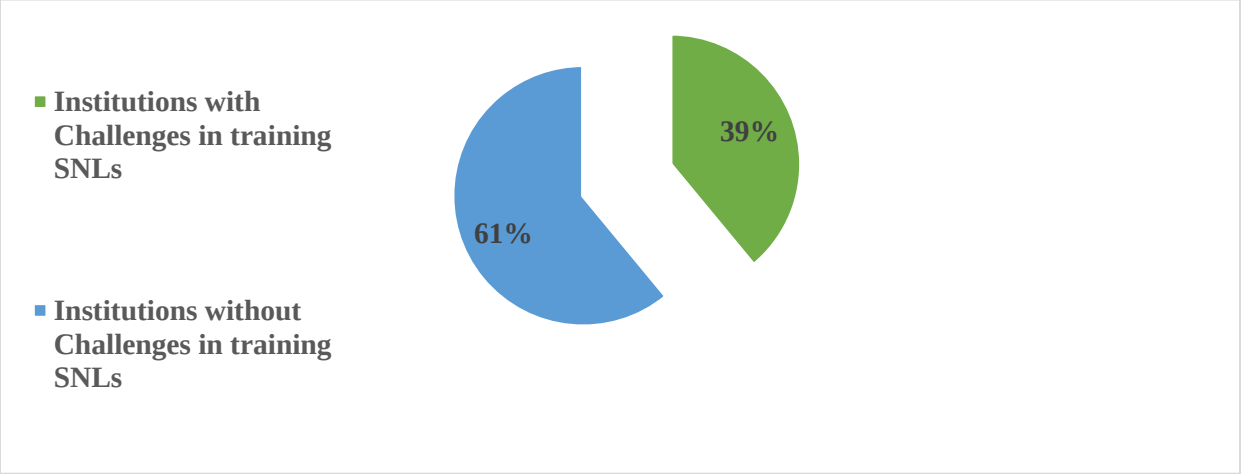
S/N	Number of Institutions	Assistive Devices in place for LWSNs
1.	55	Access to Facilities
2.	17	Mobility Aids
3.	14	Computer Software and Hardware
4.	7	Visual Aids
5.	3	Hearing Aids
Note: Multiple selection allowed (N=61)		

Source: CTVET Field Study, 2022

4.9 Challenges TVIs face in training Learners with Special Needs (LWSNs)

The survey investigated the obstacles Technical and Vocational Institutions (TVIs) encounter in training Learners with Special Needs (LWSNs). Potential challenges considered included Funding, Infrastructure, and availability of Tools, equipment, and Materials, as well as the presence of Qualified Instructors, among others. Out of the 231 surveyed institutions, 90 (39%) reported facing challenges related to LWSN training. Details regarding these challenges are illustrated in the figure below, with further information provided in figure 4.7.

Figure 4.7: Availability of Challenges in TVIs in Training LWSNs



Source: CTVET Field Study, 2022

Table 4.5: Challenges in training LWSNs

S/N	Number of Institutions	Challenges in training LWSNs
1.	66	Inadequacy of Tools and Equipment
2.	63	Inadequacy of Funding
3.	57	Inadequacy of Infrastructure
4.	56	Inadequacy of Materials (Consumables)
5.	38	Inadequacy of Qualified Instructors
Note: Multiple selection allowed (N=90)		

Source: CTVET Field Study, 2022

CHAPTER FIVE

QUALITY IN TVET

5.0 INTRODUCTION

This section examines the methods for implementing an effective TVET system that prioritizes quality teaching and learning processes. The efficiency of a TVET program and its ability to meet skill requirements are key indicators of program quality. Ensuring access to proper facilities and equipment is crucial for delivering quality TVET. Additionally, the section addresses the adequacy and accessibility of training facilities and materials to facilitate effective teaching and learning.

The Commission is mandated to ensure quality, equitable, and inclusive access in the provision of technical and vocational education and training (TVET) sector, as outlined in Section 43(1) (d) of the ERBA, Act 1023.

5.1 Internal Quality Assurance Processes

As part of the ensuring quality, there are various committees in the commission assigned to oversee the various functions of the commission. These committees are the Sector Skills Committee (SSC), National Technical Vocational and Education Training Qualifications Committee (NTVETQC), Quality Assurance Committee (QAC), Ghana Skills Development Fund Committee (GSDFC), and Enforcement Committee.

5.2 Types of Accreditation processes by (institutions / programme / facilitator)

5.2.1 Criteria for institutional / centre accreditation

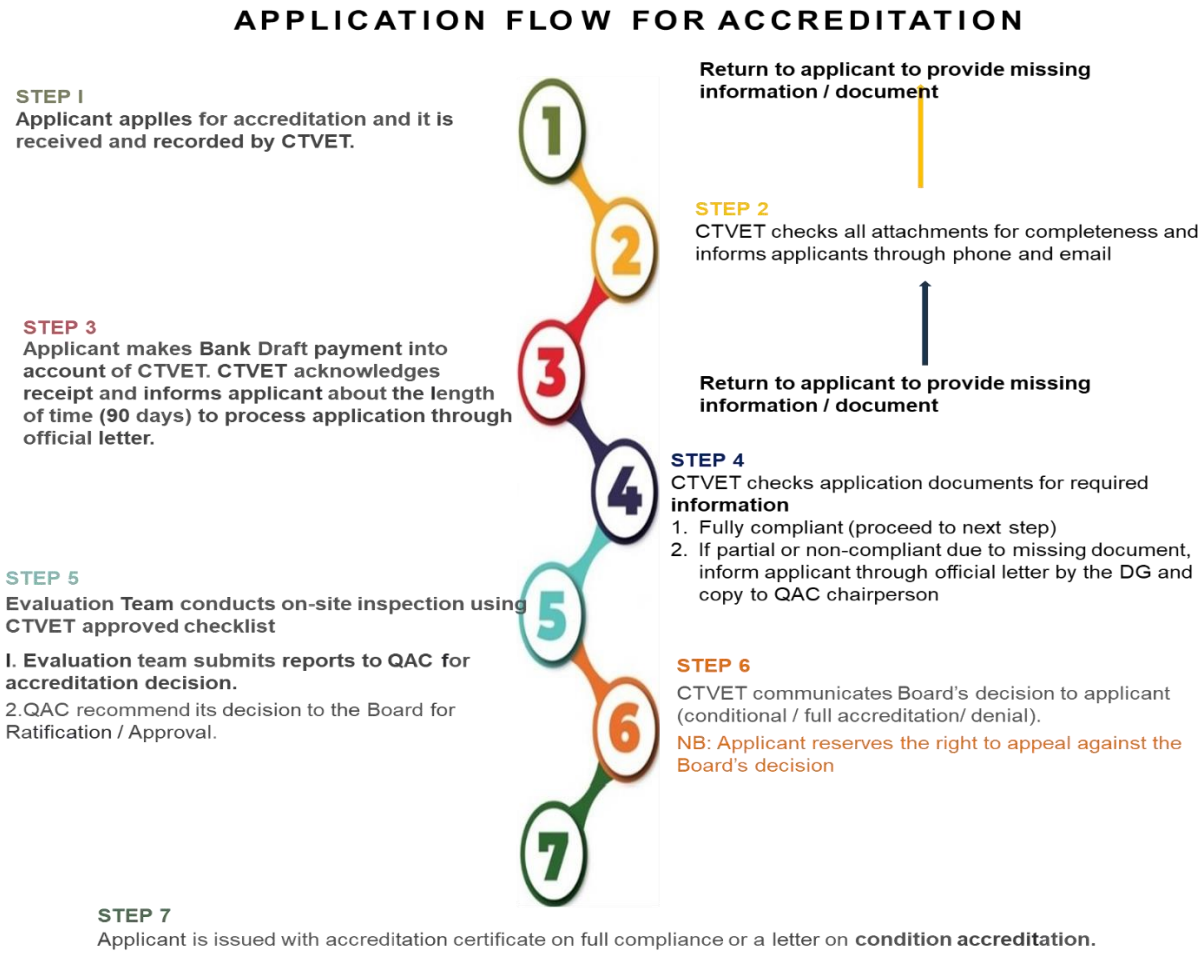
As a means of ensuring quality TVET delivery, the Commission has various types of accreditations that applicants need to acquire. These are institutional, programme, and facilitator accreditation. Below are the criteria that applicants must meet.

- First apply to the Commission.
- Have a Centre which has the required modern tools and equipment for the trade area the institution is seeking accreditation for.

- Have the required and qualified facilitators.
- Have the following policy documents: health and safety, strategic plan, admission policy and governance regulation.
- Have all the legal framework i.e. CTVET registration letter, company registration, SSNIT clearance certificate, tax clearance, Tenancy agreement not less 4yrs if the property is not owned personally.
- Have a working and active governing board and management team.

5.2.2 Application flow for Accreditation

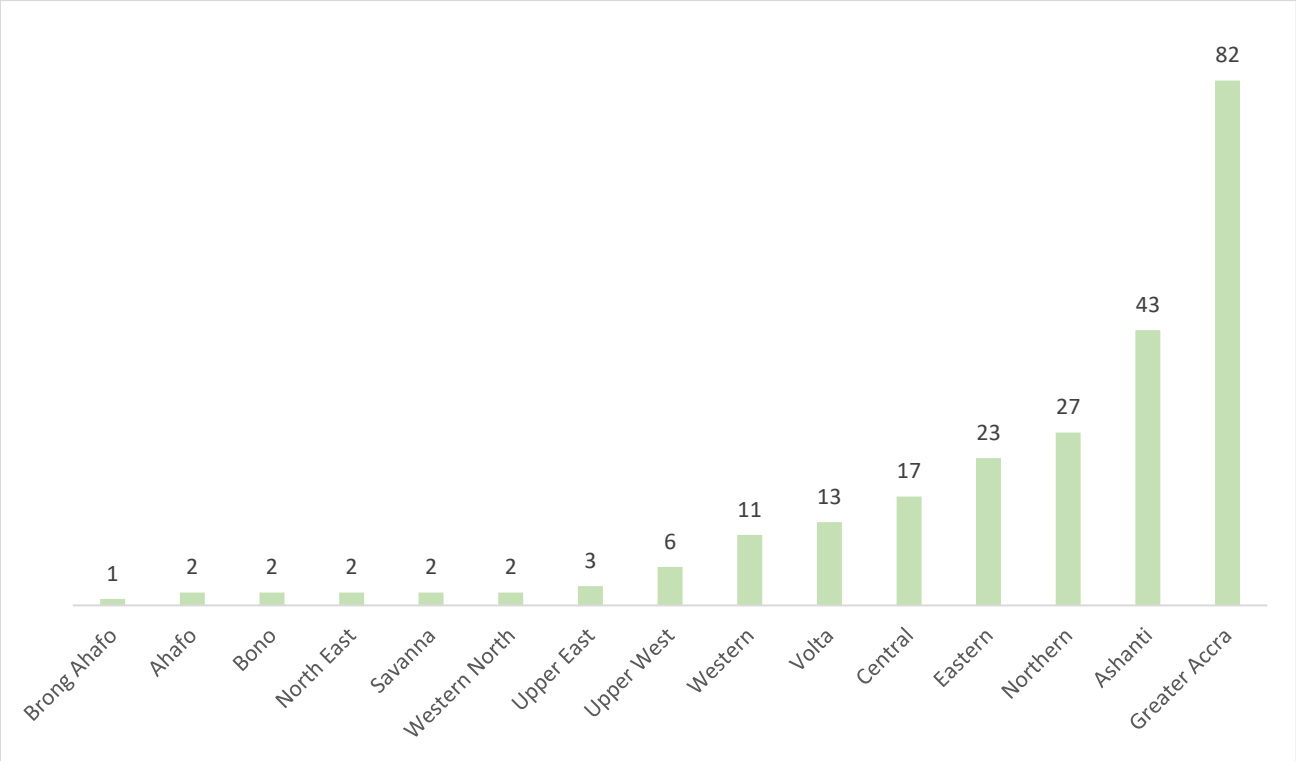
An institution seeking accreditation from the Commission will have to follow the steps below.



5.2.3 Number of Institutions Accredited

The figure 5.1 provides insight into the regional distribution of accredited (TVET) institutions across different regions of Ghana.

Figure 5.1: Regional Distribution of Accredited Institutions



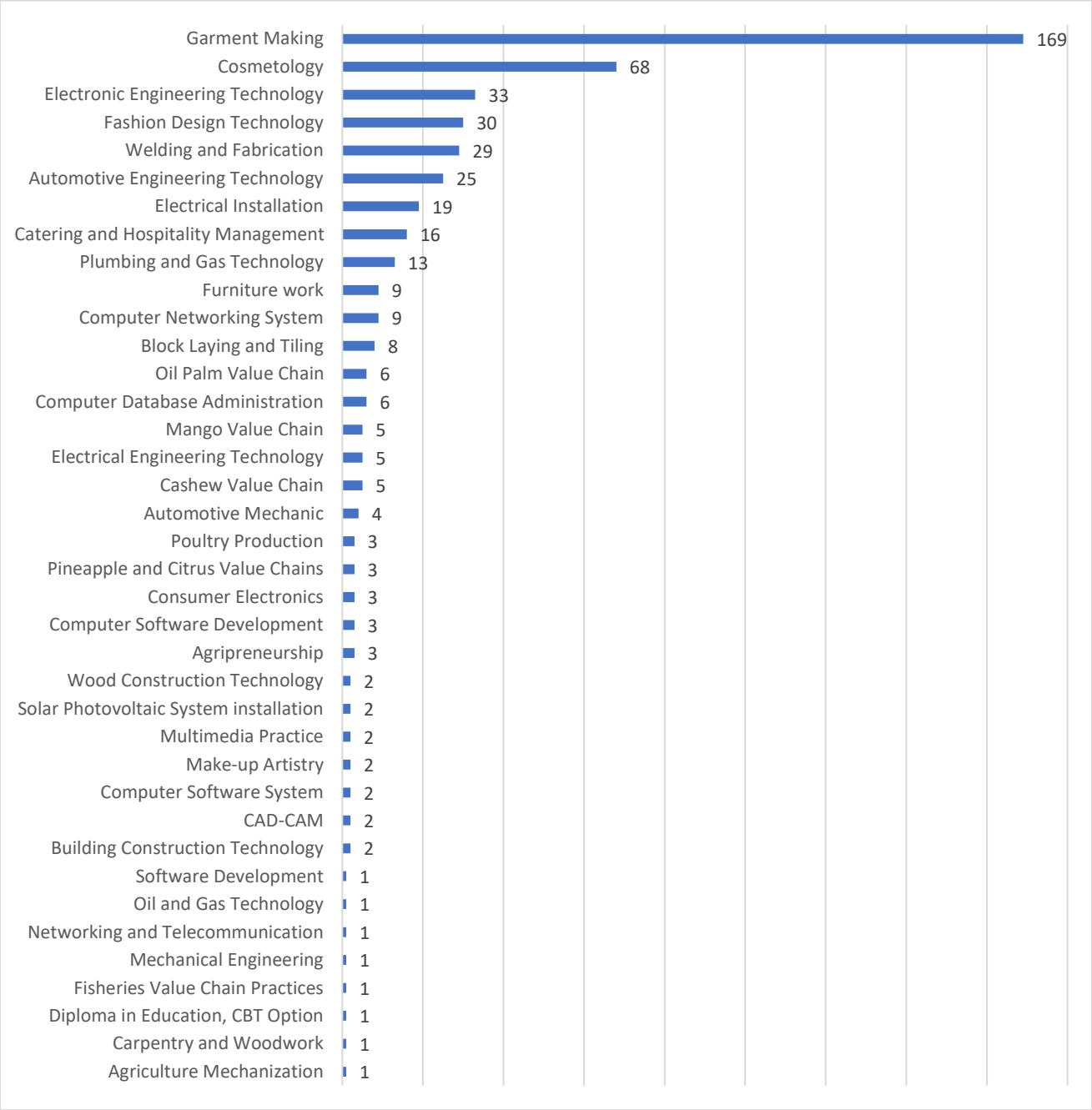
Source: CTVET field Survey, 2022

The analysis of accredited TVET institutions across regions reveals a varied landscape of technical education infrastructure in Ghana. Greater Accra and Ashanti regions lead with the highest numbers of accredited institutions, 82 and 43 respectively. Northern (27) and Eastern (23) regions also show substantial investment in technical education. Meanwhile, Central (17), Volta (13), and Western (11) regions exhibit moderate numbers. However, Upper West (6), Brong Ahafo (1), and several other regions have fewer accredited institutions.

5.2.4 Programmes Accredited Per Institutions

Figure 5.2 shows the number of accredited TVET programmes per institutions as of April 2024 by the Commission

Figure 5.2: Programmes Accredited Per Institution



Source: CTVET Field Study, 2022

The graph above illustrates the number of approved TVET programs by the commission, providing the skill requirements of different sectors in Ghana's economy. These programs cover a range of existing and emerging technical and vocational skills areas, from Carpentry and Woodwork Technology to Solar Photovoltaic System Installation and Computer Software Development.

Some programs, like Fashion Design Technology and Cosmetology, are in high demand and offered by numerous institutions, reflecting significant interest in these skill areas. Additionally, the inclusion of programmes such as Oil and Gas Technology and Automotive Engineering Technology underscores a focus on equipping learners with skills relevant and in-demand to key industries in Ghana.

5.3 Curriculum Development and Review

Aligned with the overarching sector strategy, the Commission has embraced Competency-Based Training (CBT) as the mode of delivery to enhance the quality of teaching and learning. As part of this initiative, all existing curricula have been standardized, and more than 8,000 personnel have undergone training in CBT methodologies.

CBT is an outcome-oriented approach to education and training, aligning learners' education with industry standards. To adhere to international best practices, CBT curricula, assessment tools, and learning materials are collaboratively developed with input from industry experts, academia, and relevant stakeholders. This approach prioritizes individual learner competence over group performance, with each learner deemed proficient upon meeting the established standards (Ghana TVET Report, 2022).

To ensure quality assurance, the Commission collaborates with industry experts, training providers, and academia during curriculum development and review processes to ensure the education remains relevant and responsive to industry demands.

Upon curriculum development, it undergoes comprehensive review and approval by the Sector Skills Committee (SSC) of the Commission. Subsequently, recommendations are forwarded to the Board for final approval.

5.4 Enforcement

Enforcement within the TVET landscape is to quality assure the implementation processes and stakeholders' compliance with the mandate of the Commission as stated in Act 1023. The Commission regularly conducts inspections and monitoring visits to TVET institutions. These visits serve to verify adherence to established standards and regulations while offering assistance

and guidance to enhance the quality of TVET delivery. Achieving and sustaining quality TVET delivery, the commission has put in place a set of processes, procedures, tools, and capacities. The following thematic areas are considered during the enforcement and compliance exercise:

a. Legal and regulatory requirements
b. Governance
c. Physical facilities and Infrastructure requirement
d. Health and Safety
e. Management and Operational system
f. Training Delivery Systems
g. Innovations and Corporation in TVET institutions

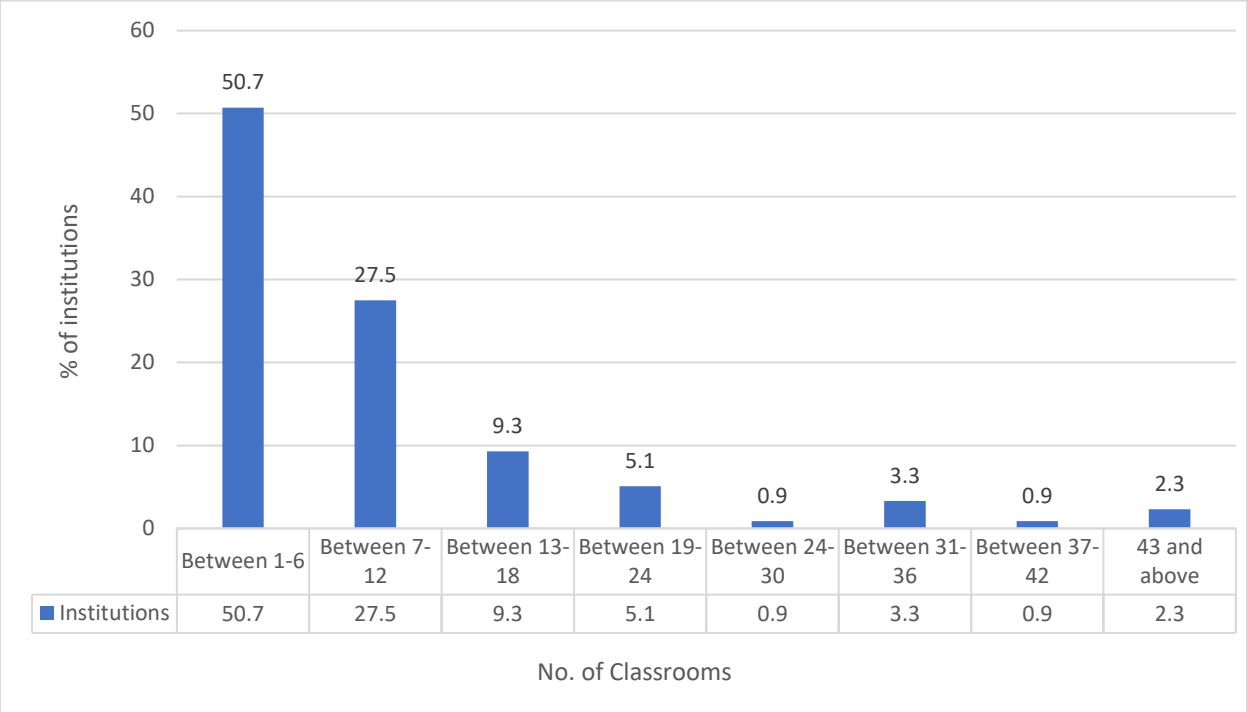
5.5 Infrastructure and Facilities

The survey investigated the condition of facilities in TVET institutions. The findings are detailed below. Infrastructure and facilities are crucial for delivering quality TVET. The presence and condition of these facilities greatly influence the learning environment. The survey assessed the availability and state of various facilities in the institutions.

5.5.1 Classrooms/Facilitation Room

In promoting educational quality, access to adequate and conducive classrooms is paramount. Out of the surveyed institutions, 215 provided responses regarding the number of classrooms available for teaching and learning. Detailed results are presented in Figure 5.3

Figure 5.3: Classrooms / Facilitation rooms available



Source: CTVET database, 2023

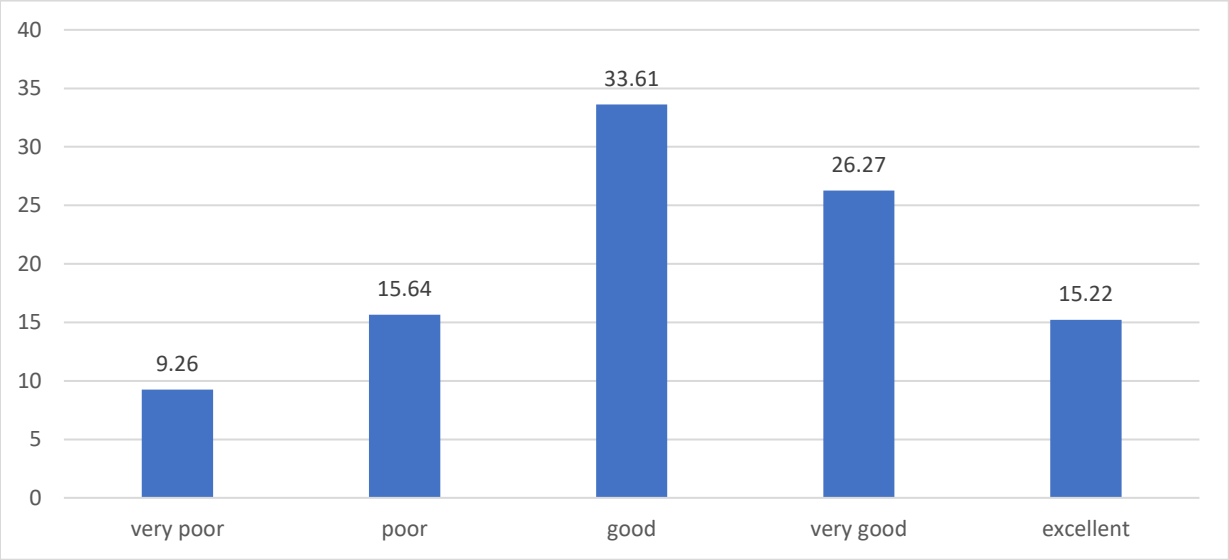
Nearly 51 % of the institutions indicated that they have between 1 and 6 classrooms, 27.5 % have between 7 and 12 classrooms. Less than 7 % of the respondents have more than 31 classrooms.

5.5.2 Condition of Classroom / Facilitation room

The condition of classrooms was rate on a 5-point Likert scale, where 1=very poor, 2 = poor, 3 = good, 4 = very good and 5 = excellent. The result from 204 out of 231 institutions is presented in figure 5.4.

Close to 25% of the respondents reported that the conditions of their classrooms are not conducive for teaching and learning. Conversely, 15.22% of the respondents indicated that they have excellent classrooms, while 33.61% reported that their classrooms are in good condition. A classroom considered to be in good condition should be furnished, well-ventilated, and well-lit, among other factors.

Figure 5.4: Condition of the Classroom/Facilitation Room

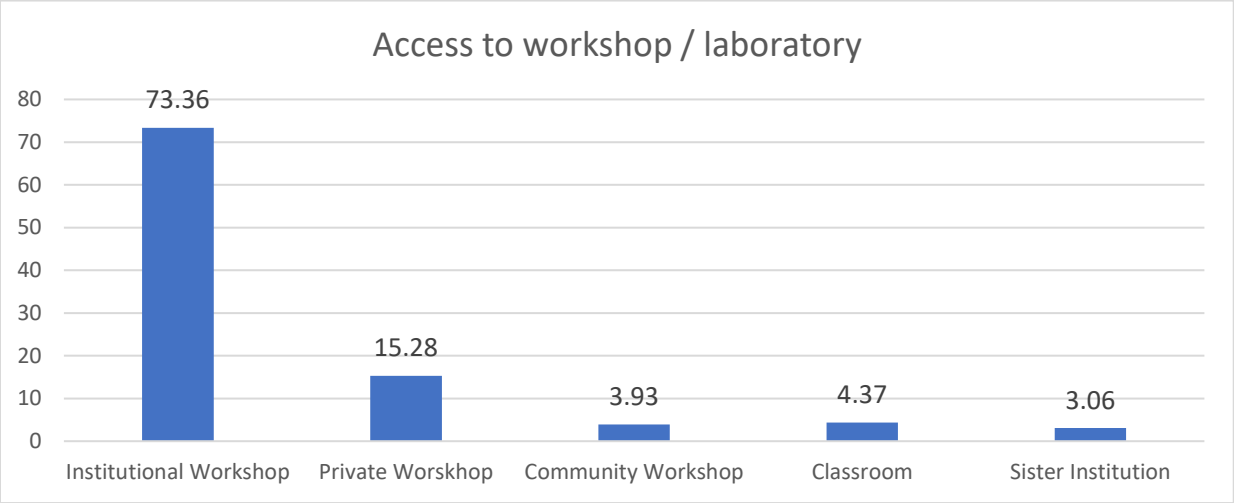


Source: CTVET field survey data, 2023.

5.5.3 Availability of Practical Workshops/Laboratory

The provision of quality Technical and Vocational Education and Training (TVET) relies heavily on accessible and functional workshops and laboratories. These facilities play a crucial role in enhancing teaching quality and the relevance of learning content, particularly in practical disciplines. When asked about the availability of workshop facilities or laboratories, 229 respondents, representing 99.13% of the survey participants, confirmed their access. Further inquiries into the proximity of these facilities yielded insightful responses, as illustrated in Figure 5.5.

Figure 5.5 Access to Workshop and Laboratory Facilities



Source: CTVET field survey data, 2023

The cornerstone of quality TVET lies in the provision of functional workshops and laboratories, essential for practical learning experiences. The survey, which garnered responses from 229 institutions, revealed that nearly 100% of respondents have access to workshop facilities or laboratories. Further analysis, as depicted in Figure 5.4, delved into the proximity of these facilities.

The survey findings illustrate that 73.36% of respondents possess workshops and laboratories within their institutions, while 3.06% utilize workshop facilities from sister institutions. Additionally, 3.93% rely on community workshops, and 15.28% utilize workshops provided by private organizations. Surprisingly, less than 5% of respondents reported using classrooms as makeshift workshops.

Although the proportion of institutions with their own workshop facilities decreased slightly to 73.36% compared to 81% in 2021, the overall number of institutions with access to workshops increased in 2023. This growth can be attributed to the retooling and upgrade of workshops in 23 institutions, as well as the refurbishment of 44 TVET Institutions formerly under NVTI.

Furthermore, the reliance on private workshops for practical works increased from 3% in 2021 to 15.28% in 2023, indicating a shifting trend. Similarly, the usage of workshop facilities from sister

institutions increased from 1% to 3.06% during the same period. Discrepancies in figures may be attributed to the expanded sample size for the 2023 survey.

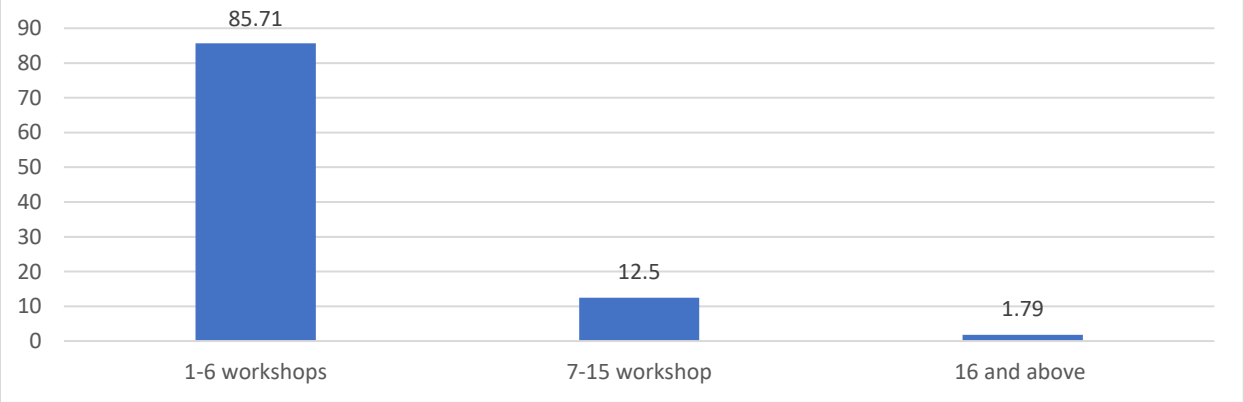
Analysis reveals that 73.36% of respondents have workshops and laboratories within their institutions, while 3.06% utilize workshop facilities from sister institutions. Additionally, 3.93% utilize community workshops, and 15.28% access workshops belonging to private organizations. Furthermore, less than 5% utilize classrooms as makeshift workshops.

Though the proportion of institutions with their workshop facilities has decreased to 73.36% from 81% in 2021, the overall number of institutions with access to workshop facilities has increased in 2023 due to retooling and upgrades. Similarly, reliance on private workshops has increased from 3% in 2021 to 15.28% in 2023, alongside an increase in the use of workshop facilities from sister institutions.

5.5.4 Number of institutional workshops

Respondents were asked to specify the number of workshops available within their institutions. The distribution of responses is presented in Figure 5.6.

Figure 5.6: Number of institutional workshops



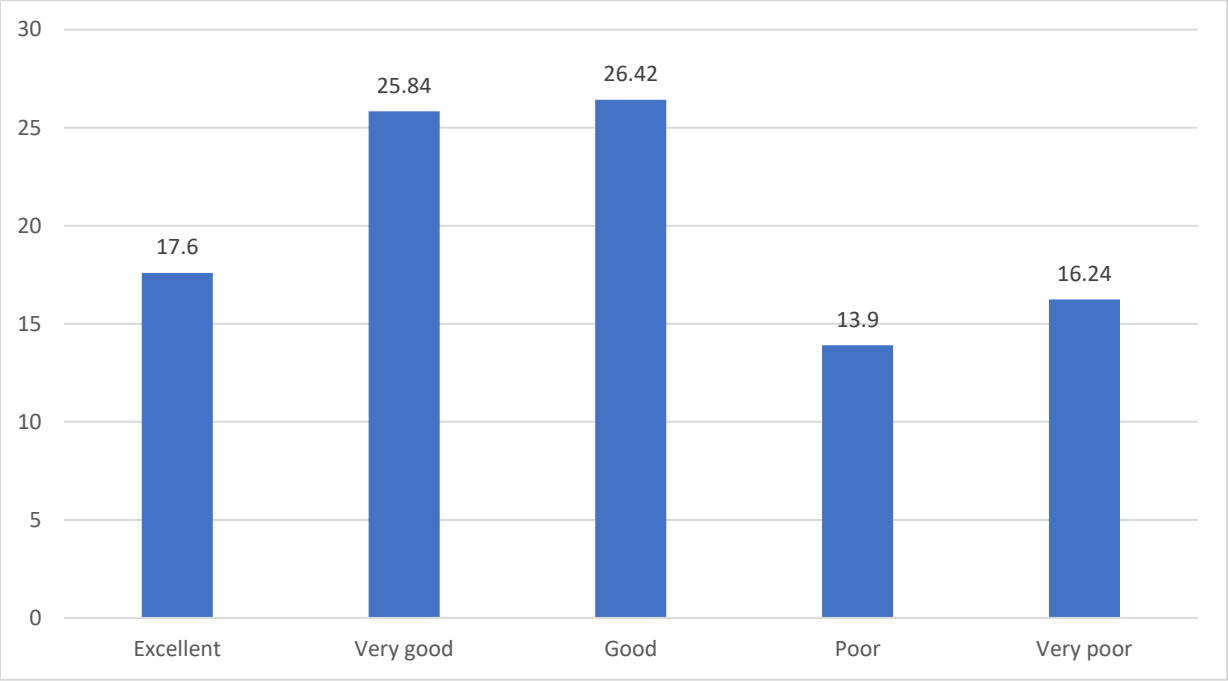
Source: CTVET field survey data, 2023

Respondents were asked to specify the number of workshops within their institutions, as depicted in Figure 5.6. Results indicate that 85.71% of respondents have between 1-6 workshops, correlating with the number of programs offered. Less than 2% of respondents reported having more than 16 workshops, aligning with the institution's program offerings.

5.5.5 Condition of the workshops

Respondents assessed the condition of their workshops using a Five-point Likert scale, with ratings ranging from 1 to 5, where 1 signifies excellent and 5 indicates very poor. Figure 5.7 provides a visual representation of the distribution of these ratings.

Figure 5.7: Condition of the Workshops



Source: CTVET Field Survey data, 2023

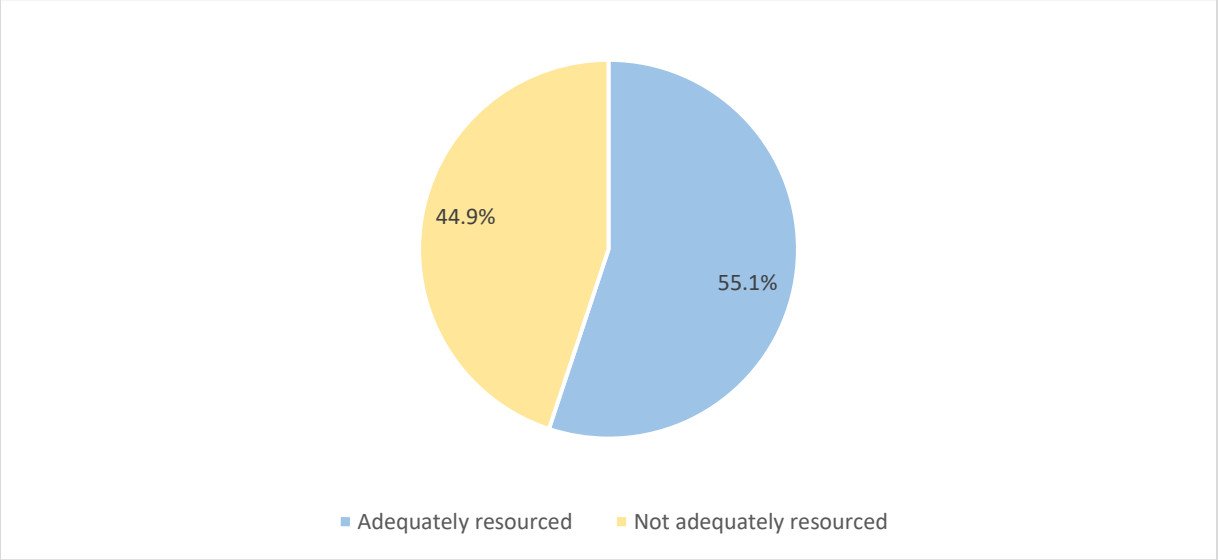
Workshop conditions were assessed using a Five-point Likert scale, where a rating of 1 signified excellent and 5 indicated very poor. Figure 5.7 presents the distribution of ratings, revealing that 69.86% of respondents regarded their workshop conditions as generally good, likely due to ongoing retooling and construction initiatives. Furthermore, 25.84% rated their workshop conditions as very good, reflecting the beneficial outcomes of the AVIC and NVTI retooling projects.

5.5.6 Resourced workshops

Respondents were asked about the adequacy of training materials at workshops, with 55.1% affirming adequacy, while 44.9% reported insufficiency. Moreover, 66.8% indicated receiving the

required consumables for training, though only 30% received them regularly, as shown in Figure 5.8 and Figure 5.9.

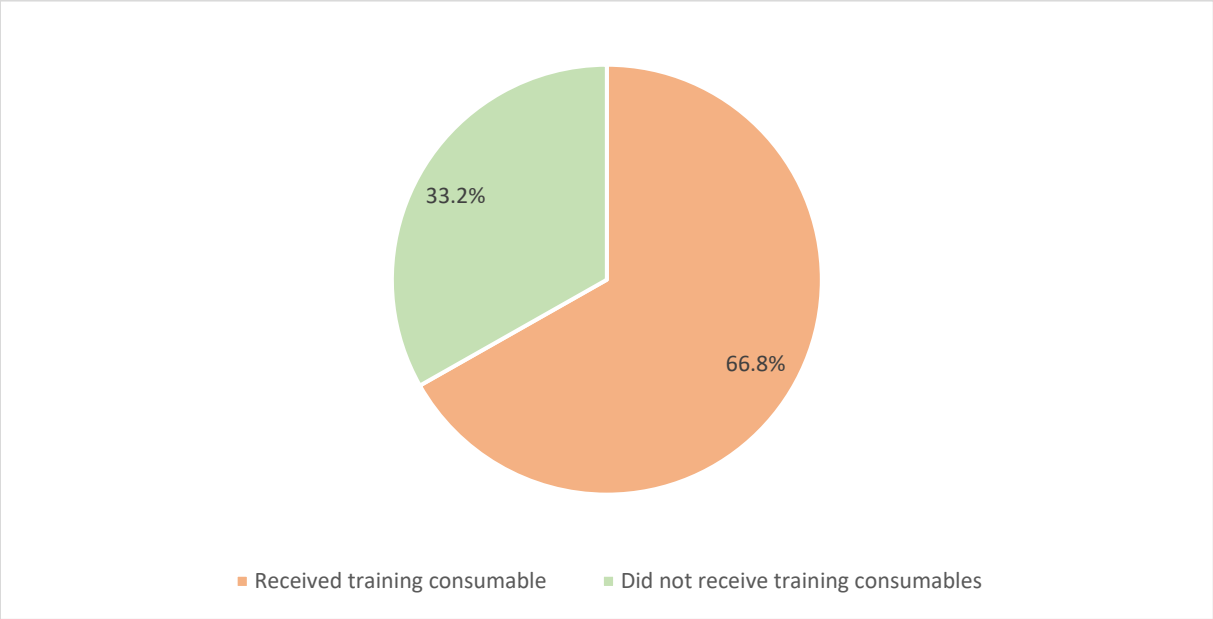
Figure 5.8: Adequacy of Training Materials (Consumables) at workshops



Source: CTVET Field Survey data, 2023

Again, per the results, it was revealed that 55.1 % of respondents said their workshops are adequately resourced with training materials for practical lessons. On the other hand, however, 44.9 % mentioned that they do not enough training materials for practical lessons. Respondents were again asked whether they have received the required consumables for training, their responses are indicated in figure 5.8. The responses show that 66.8 % indicate that have received the required consumables for training whereas 33.2 % indicate that they did not receive the required training consumables for training.

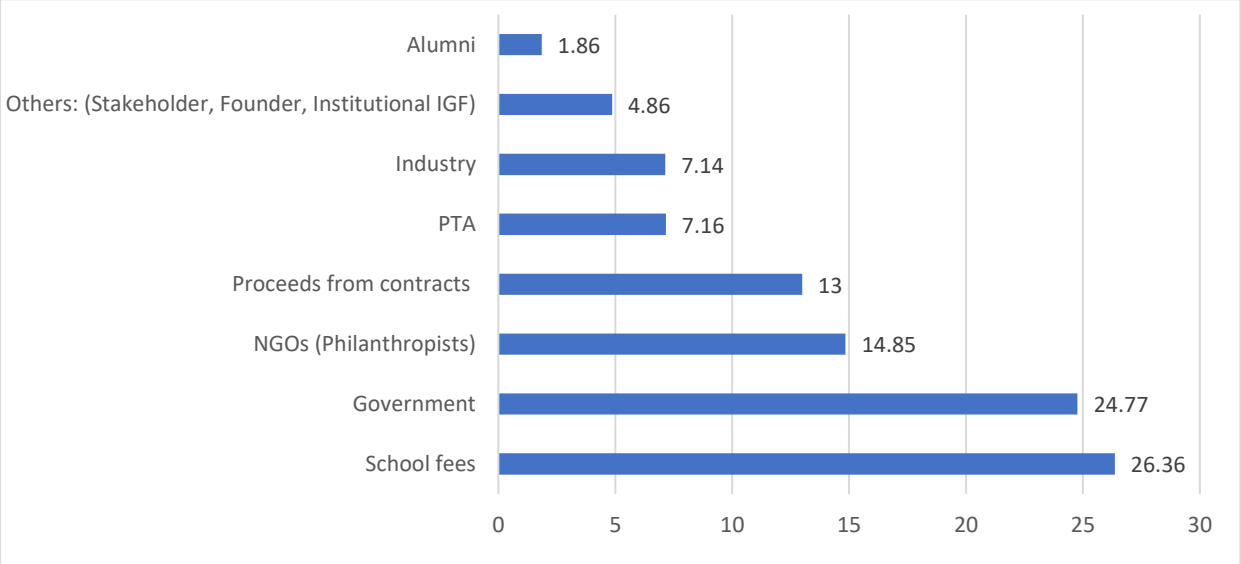
Figure 5.9: Provision of required consumables for training



Source: CTVET Field Survey data, 2023

In terms of the frequency of the provision of the required training consumables, majority (65.80 %) of the respondents indicated that they do not often receive the required training consumables. Less than 30 % of respondents indicated that they receive the consumable regularly.

Figure 5.10 Source of Funds for Resourcing Workshops



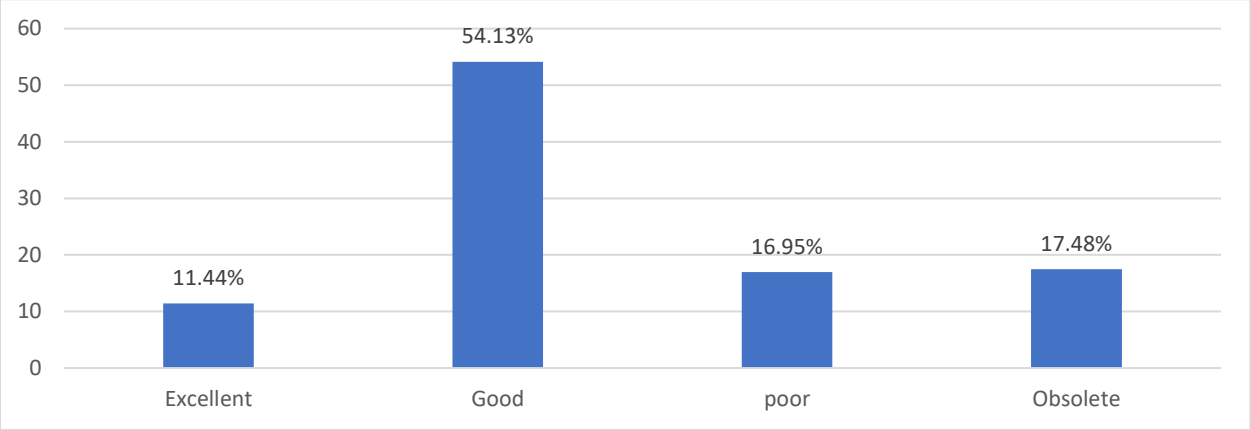
Source: CTVET Field Survey data, 2023

The survey explored funding sources for workshop resourcing. Among the private institutions, 26.36% indicated school fees as major source of funding and 7.16% resource their workshop with funding from PTA. In the public institutions however, 24.77% of them receive funding from government to resource their workshops. Industry contributed 7.14% to training materials, while Alumni accounted for 1.86%, as illustrated in Figure 5.10.

5.5.7 Condition of the tools and equipment

Respondent were asked to rate the condition of the tools and equipment in their workshop on a four-point Likert scale, where 1 = excellent, 2 = good, 3 = poor and 4 = obsolete. The details of the rating by 218 respondents are depicted in figure 5.11.

Figure 5.11: Condition of the tools and equipment



Source: CTVET field survey data, 2023

Respondents evaluated the condition of tools and equipment using a four-point Likert scale, ranging from 1 for excellent to 4 for obsolete. Figure 5.11 depicts that 54.13% rated their tools and equipment as good, with 11.44% considering them excellent. However, 17.48% described their tools and equipment as obsolete, highlighting the necessity for retooling efforts.

Comparing the 2023 data with that of 2021, 51.8% of respondents in 2021 reported that their tools and equipment were in good condition, consistent with the 2023 findings. However, the percentage of respondents indicating subpar tool conditions increased from 14.1% in 2021 to 34.43% in 2023.

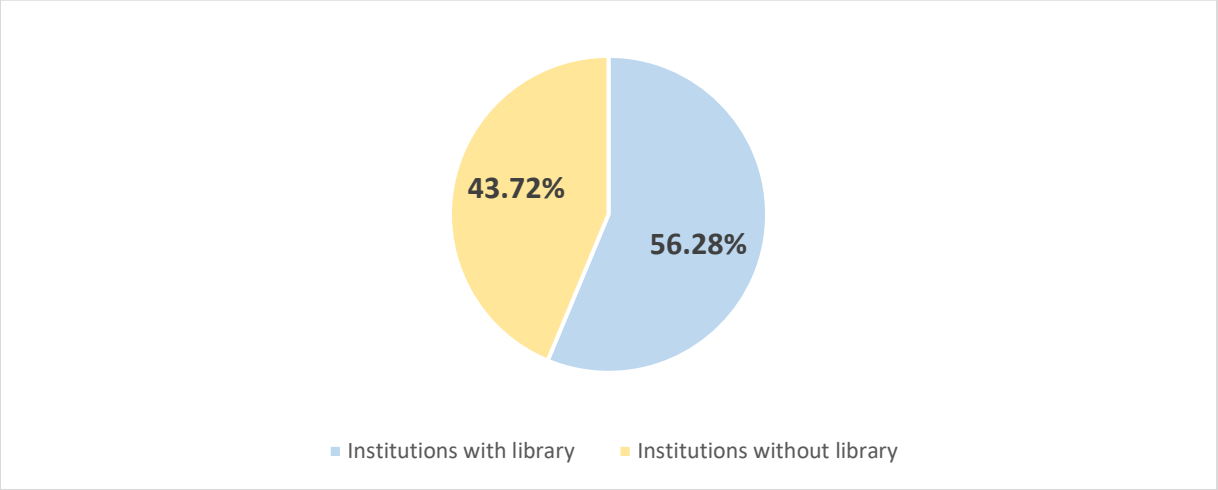
The comparison between the two surveys is not entirely equivalent, as this year's questionnaire allowed respondents to specify obsolete tools and equipment. The shift in responses from very

good/excellent to good/poor/obsolete underscores the requirement for enhanced tools and equipment.

5.5.8 Availability and condition of Library facility

Respondents were asked to indicate whether they have a school library and rate the condition of the library if they have. The response shows that 56.28 % of the training institutions have library facilities as against 43.72 % without library facility.

Figure 5.12: Availability of Library Facility



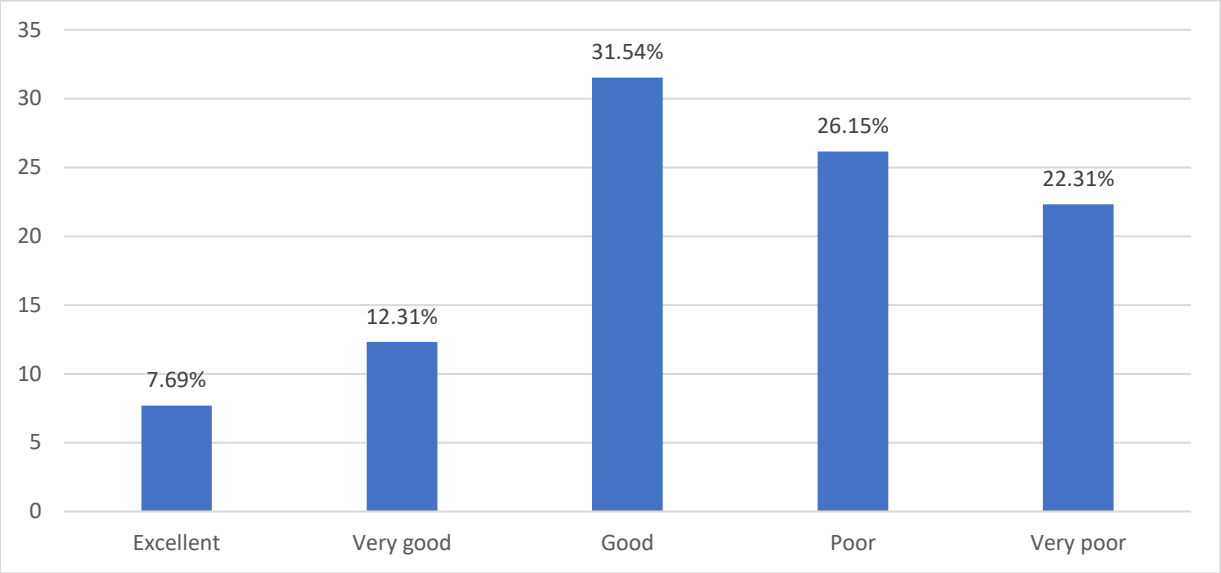
Source: CTVET Field Survey data, 2023

5.5.9. Condition of Library Facility

Out of the respondents (130) who reported having library facilities, they were requested to assess the condition of the library using a five-point Likert scale, where 1 denoted excellent and 5 represented very poor. The outcome is illustrated in Figure 5.12.

From the survey, 51.54 % indicated that their library facilities are in good, very good or excellent condition compared to 48.46 % who rated the conditions of their library poor if not very poor. The result indicates that almost half of the institutions with library facilities indicated that the conditions are poor.

Figure 5.13: Condition of the Library

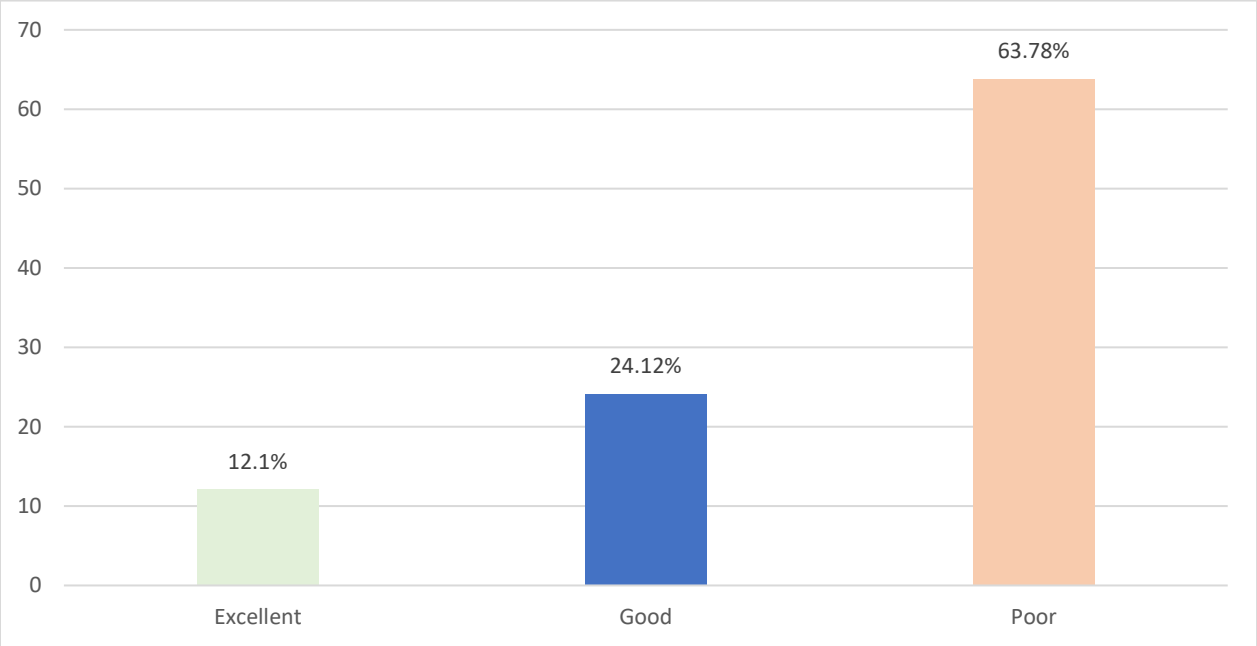


Source: CTVET Field Survey data, 2023. N=130.

5.5.10 Condition of computer laboratory

The condition of computer laboratories in the majority of training institutions was reported as poor (63.78%). Only a small proportion of respondents rated the condition of computer laboratories as excellent (12.1%), as depicted in Figure 5.14.

Figured 5.14: Condition of the computer laboratory

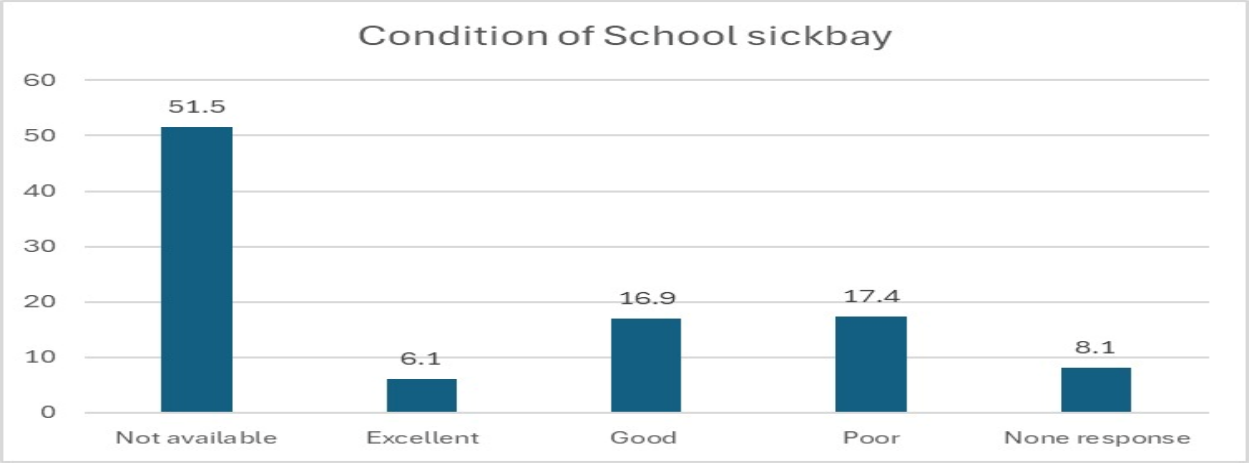


Source: CTVET Field Survey data, 2023

5.5.11: Condition of Sickbay

Out of the 231 TVET institutions surveyed, 51.5% reported a lack of a dedicated sickbay. Among those with sickbays, 16.9% were rated as being in good condition, 17.4% as poor, and only 6.1% as excellent. Additionally, 8.1% did not provide feedback. These findings underscore the necessity for enhanced healthcare facilities within TVET institutions. Refer to Figure 5.15 for the survey results.

Figure 5.15: Condition of Sickbay

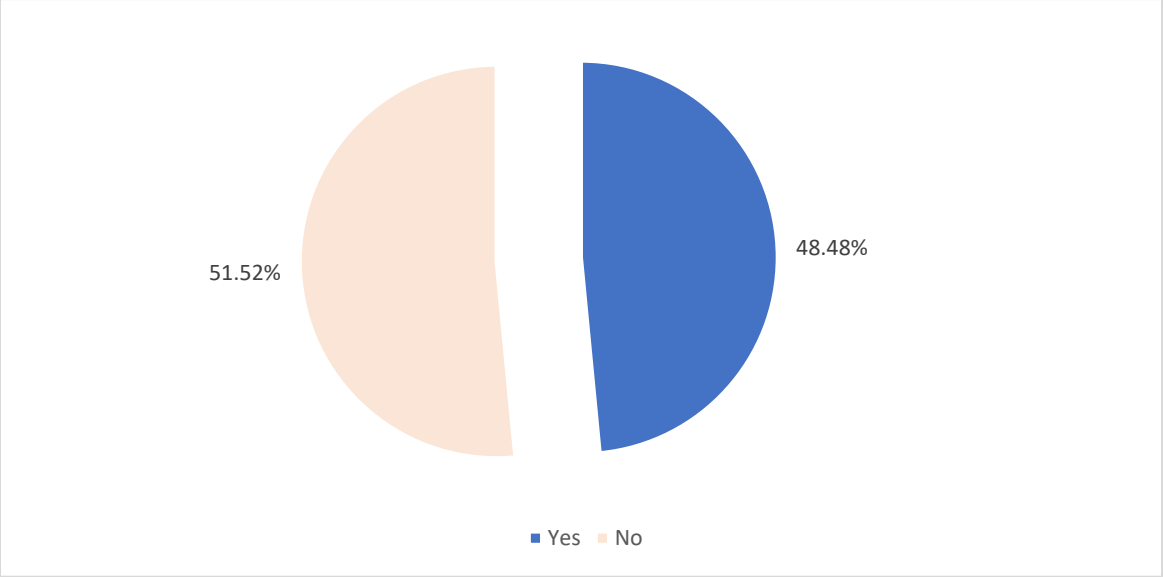


Source: CTVET Field Survey data, 2023

5.5.12 Availability of functional career guidance and counselling unit

Figure 5.16 shows that, majority (51.52 percent) of the respondents indicated that they do not have a functional guidance and counselling unit. The other half (48.48 percent) stated that they do have.

Figure 5.16: Availability of functional career guidance and counselling unit

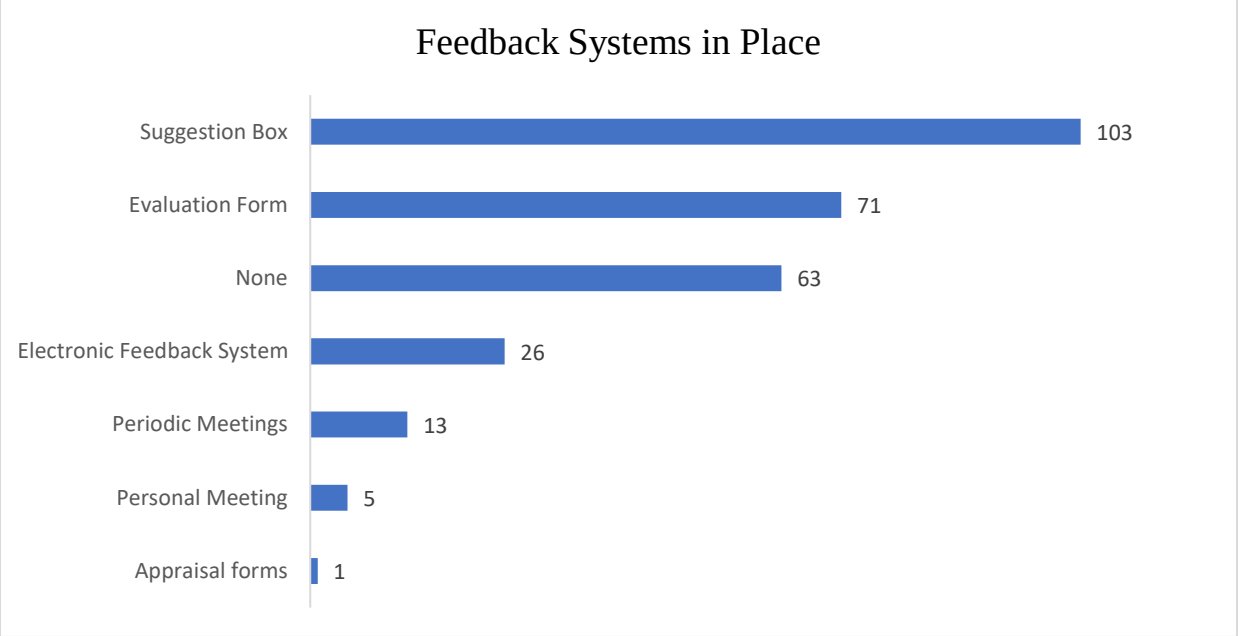


Source: CTVET Field Survey data, 2023

5.5.14 Type of Feedback Systems in Place

The data offers insight into the feedback mechanisms employed by TVET institutions, demonstrating a blend of traditional and contemporary methods. Traditional avenues such as suggestion boxes and evaluation forms are still widely utilized, with 103 and 71 institutions respectively opting for these channels. Additionally, there is a discernible adoption of electronic feedback systems by 26 institutions, signaling a trend towards digital platforms for collecting input.

Figure 5.17: Type of Feedback Systems in Place



Source: CTVET field survey data, 2022

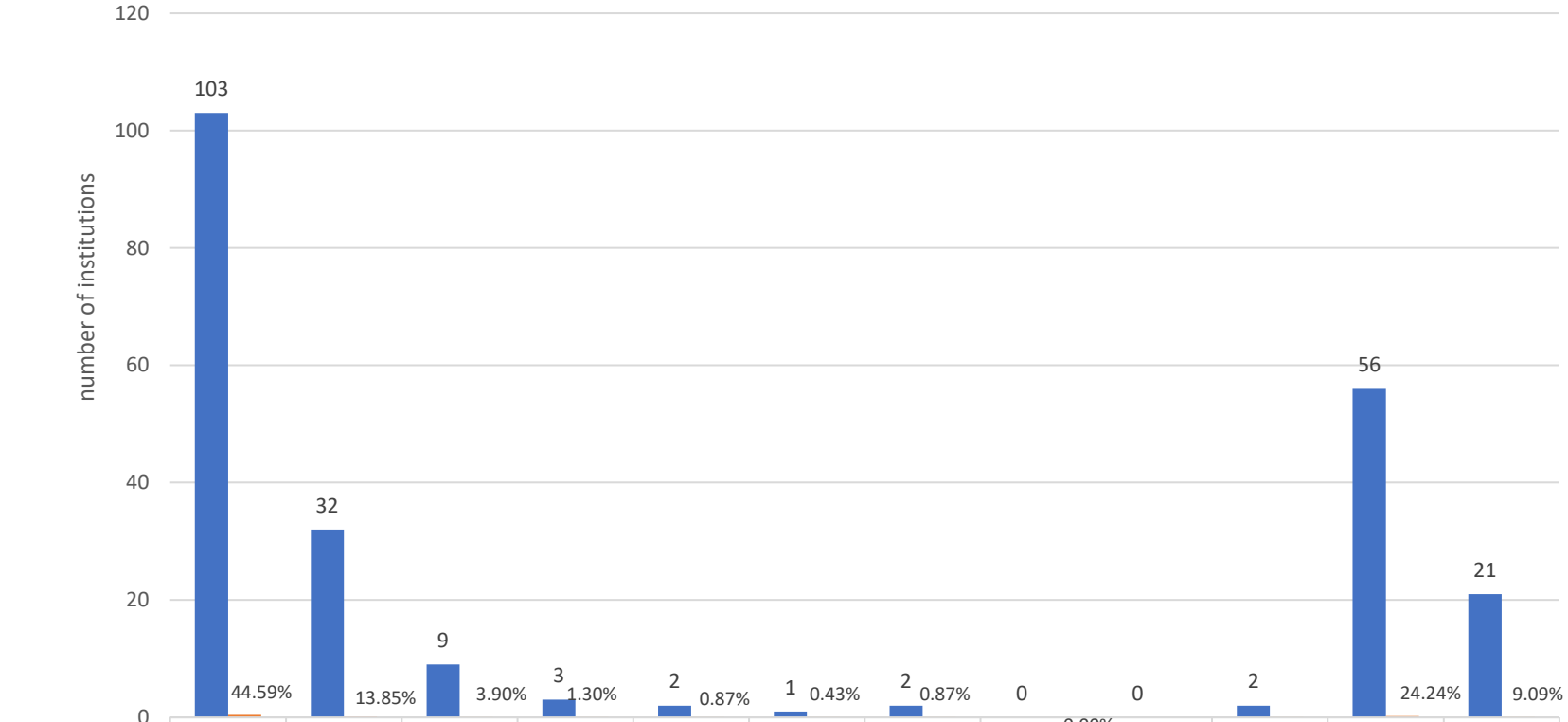
Additionally, periodic meetings and personal meetings are utilized by thirteen and five institutions respectively, highlighting the importance of face-to-face communication channels in collecting feedback. Finally, a total of 63 institutions reported not having formal feedback mechanisms in place.

5.5.15 Number of staff trained in CBT and registered with CTVET

According to the survey findings, it was noted that 103 institutions (44.59%) with approximately 1-10 staff members have undergone the necessary training and registration as mandated by the

Act. Similarly, 32 institutions (13.85%) with about 11-20 staff and 9 institutions (3.90%) with approximately 21-30 staff have also completed the required training and registration, as depicted in figure 5.18.

Figure 5.18: Number of staff trained in CBT and registered with CTVET.



	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	none	no response
frequency	103	32	9	3	2	1	2	0	0	2	56	21
percent	44.59%	13.85%	3.90%	1.30%	0.87%	0.43%	0.87%	0.00%	0.00%	0.87%	24.24%	9.09%

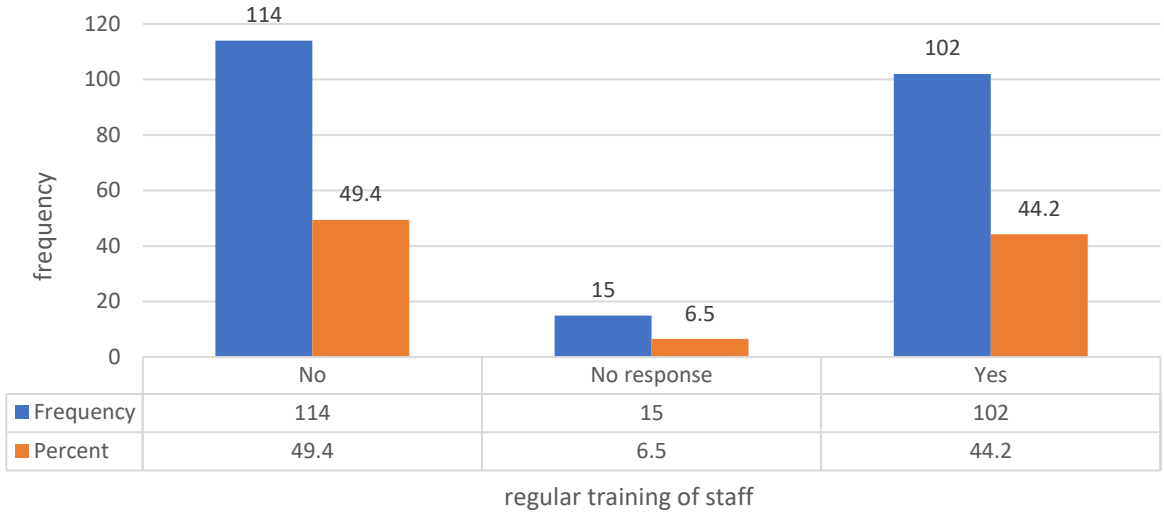
Source: CTVET field survey data, 2023

Additionally, the survey revealed that 56 institutions (24.24%) have staff members who have not yet received training in CBT methodologies.

5.5.16 Availability of regular training workshops to build the capacity of the staff.

From the survey, 102 representing 44.2 % of the sampled institutions indicated that, they frequently have training workshops to building the capacity of the staff. 114 representing 49.4 % of the institutions revealed that, they barely organize training workshop to building the capacity of the staff.

Figure 5.19: Availability of regular training workshops to build the capacity of the staff.

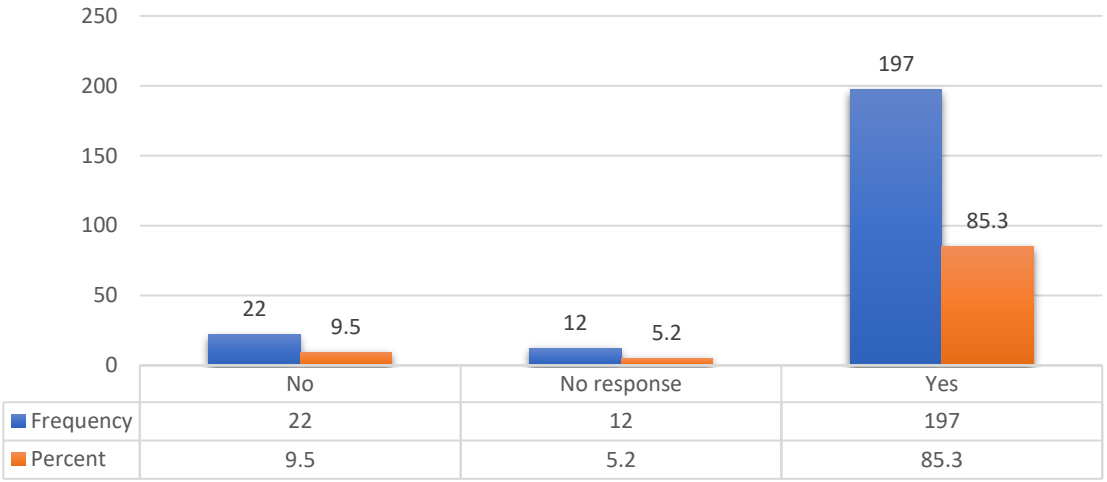


Source: CTVET Field Survey data, 2023

5.6 Workplace Experience Learning (WEL)

Workplace Experience Learning (WEL) is an industrial attachment that provides learners with the opportunity to apply what they have learned in school to real work situations. WEL is well-structured as part of the learner's study program, with credits allocated to them. A learner cannot graduate if they fail to participate in Workplace Experience Learning. WEL is assessed as a crucial aspect of the learner's training, contributing to their expected competencies (Ghana TVET Report 2021, Volume 1). The survey revealed that 197 (85.3%) of the institution's learners/students engaged in WEL, while 22 (9.5%) did not participate.

Figure 5.20: Workplace Experience Learning (WEL), Internship and Industrial Attachment during their training period



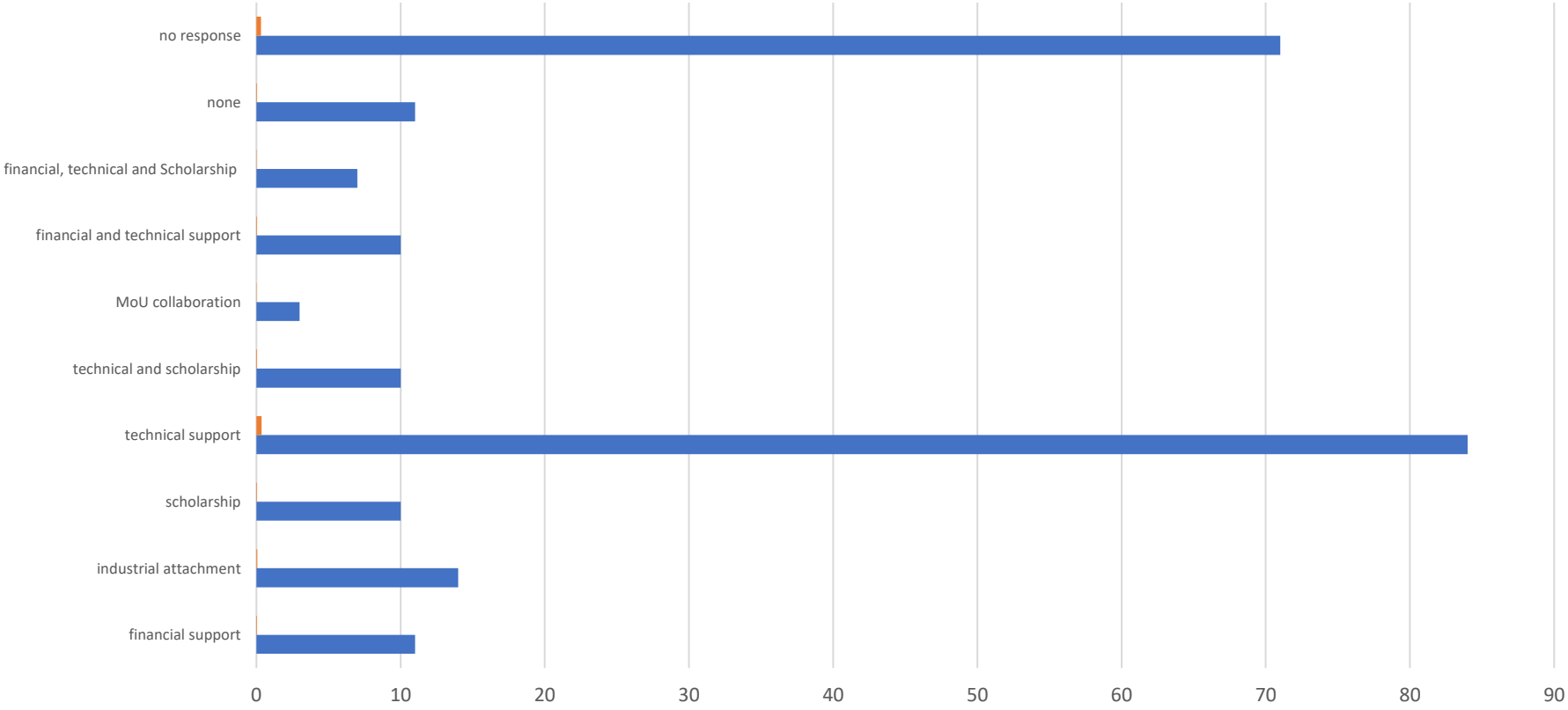
	No	No response	Yes
Frequency	22	12	197
Percent	9.5	5.2	85.3

Source: CTVET field survey data, 2023

5.6.1 Forms of partnership with listed agencies

Institutions were asked to indicate the various forms of partnership arrangements with industry. Figure 5.20 gives provide the forms of partnership that exist among institutions and industry.

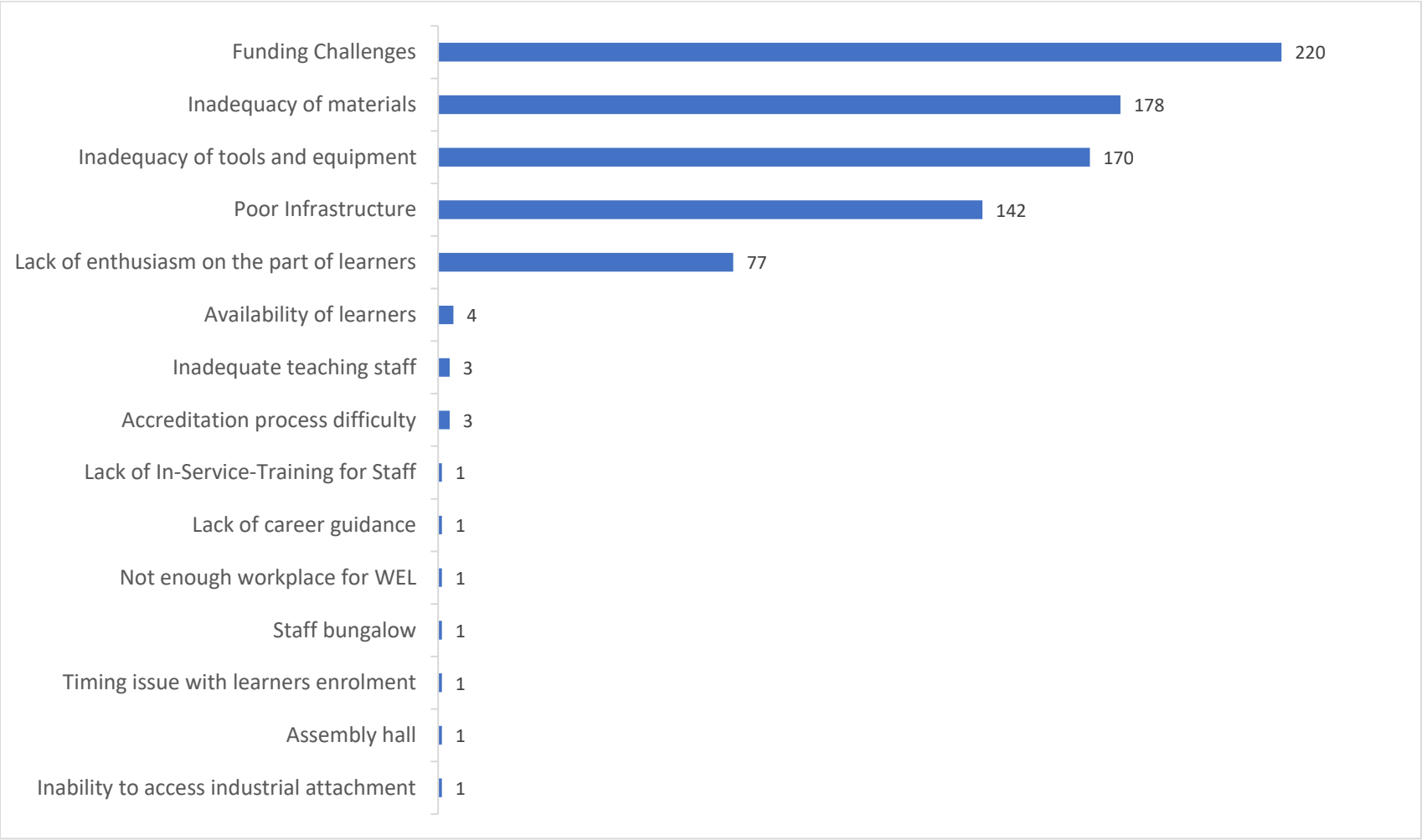
Figure 5.21: Forms of partnership with listed agencies



	financial support	industrial attachment	scholarship	technical support	technical and scholarship	MoU collaboration	financial and technical support	financial, technical and Scholarship	none	no response
percent	4.76%	6.06%	4.33%	36.36%	4.33%	1.30%	4.33%	3.03%	4.76%	30.74%
frequency	11	14	10	84	10	3	10	7	11	71

Source: CTVET Field Survey data, 2022

Figure 5.22: Challenges in providing training



Source: CTVET Field Survey data, 2022

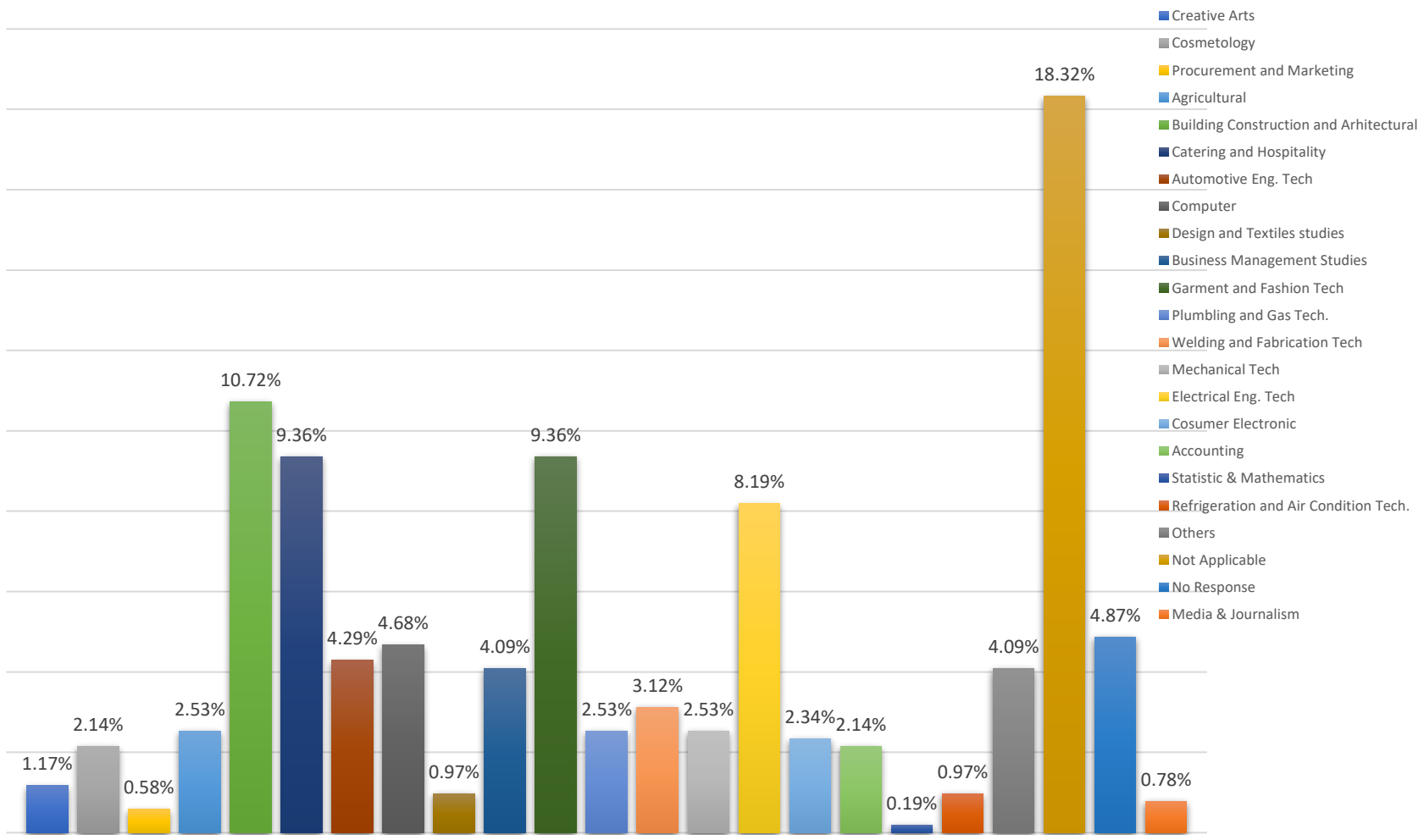
The major challenges faced by training institutions is depicted in figure 5.22. the result shows that the most common challenge among respondents is funding (220). Again, 178 respondents reported inadequate access to training materials, and 142 respondents indicated poor infrastructure as the main challenge. Only 3 respondents reported inadequate teaching staff and accreditation process difficulty as challenges which however, shows an improvement in the Commission's regulatory services.

5.6.2 Implementation of Competency Based Training (CBT) programmes and Non-Competency Based Training programmes.

A total of 231 institutions participated in the survey and provided responses to the question, allowing for multiple responses. Analysis of the data shows that 10.72% of respondents offer programs in Building Construction and Architectural fields that are not based on Competency-Based Training (CBT). Similarly, 9.36% of institutions provide training in Catering and Hospitality Management, and the same percentage offer programs in Garment and Fashion Technology. About 8.19% of respondents indicate offering non-CBT programs in Electrical Engineering Technology. Additionally, 4.68% of institutions offer non-CBT Computer (ICT) related programs, while 4.29% provide programs in automotive engineering technology. However, only 0.19% of sampled institutions offer non-CBT programs in Statistics and Mathematics.

In 2021, institutions were requested to specify the CBT programs they offer. Responses from 85 institutions indicate that 39.18% of them provide CBT programs in Garment Making. Furthermore, 7.46% offer CBT programs in Welding and Fabrication, alongside Automotive Engineering Technology.

Figure 5.23: Non-CBT programmes offered in the institution.



Source: CTVET Field Survey, 2022

CHAPTER SIX

INDUSTRY ENGAGEMENT AND EMPLOYABILITY

6.0 INTRODUCTION

This chapter **provides** information on the role of the industry in the TVET delivery system in Ghana. For the TVET sector to have a demand-driven curriculum, the industry has a crucial role to play in establishing strong industry linkages, setting occupational standards, facilitating Workplace Experience Learning (WEL) for learners, and ultimately providing job opportunities after completion of their study programs. The industry, as a key component, is engaged through respective established Sector Skills Bodies, which serve as advisory bodies to groups of related industries.

6.1 Skills Required by Industry

The Commission for TVET conducted Skills Gap Analysis and Audit in the following 12 Economic Sectors in 2022: Construction, ICT, Agriculture, Energy, Electronics Automation and Electrical, Manufacturing, Tourism & Hospitality, Textile & Apparel, Logistics & Transport, and Healthcare. The skills gap audit report identified some essential soft skills required by industry in addition to technical skills. These include:

i. Teamwork skills
ii. Leadership skills
iii. Negotiation skills
iv. Time management skills
v. Problem solving skills
vi. Creativity
vii. Commitment to hard work
viii. Working independently
ix. Learning on the job
x. Interpersonal
xi. Commitment to work

xii. Computer literacy
xiii. Good communication
xiv. Problem solving
xv. Attention to detail
xvi. Time management
xvii. Teamwork
xviii. Emotional stability
xix. Working independently

Source: CTVET Field Survey (2022)

The current Competency-Based Training (CBT) curriculum development is designed to address skills gaps with the support of sector skills bodies. The Commission for TVET's approach to curriculum development involves reaching out to industries through their Sector Skills Bodies for tasks such as occupational standards generation, validation, curriculum development, and other engagements related to Technical and Vocational Education and Training (TVET).

6.2 Sector Skills Bodies (SSBs)

Sector Skills Bodies (SSBs) are advisory industry bodies that aim to support the Government of Ghana's strategy to build a skills system that produces a demand-driven, robust labour market, and skills intelligence (GIZ, 2019). In essence, SSBs consist of related major industries or enterprises under a common structure, working to drive growth and competitiveness within their sector. The primary function of SSBs is to reform skills development in Ghana and globally by strengthening the linkages between industry and training systems. Additionally, they play a crucial role in driving the professional practices of their respective sectors.

As of 2023, the number of economic sectors identified by the Commission has increased from 22 to 24 (refer to Appendix III for the list of identified SSBs). The total number of established SSBs as of 2023 is 12, one more than reported in the initial TVET Report. Among the remaining 12 sectors, four (Environment, Sanitation and Waste Management, Media and Entertainment, Telecommunication, and Electricals, Electronics, and Automation) are currently in the process of establishment.

To promote the participation of SSBs in the curriculum development process, the Commission provides training for members in various areas, including but not limited to:

- Skills for Trade and Economic Diversification (STED)
- Skills Needs Anticipation (SNA)
- Skills anticipation for Green Jobs
- Skills in CBT curriculum development
- Leadership and strategic management training

6.3 Contribution of SSBs towards Skills Development

6.3.1 Curriculum Development

The Commission in collaboration with the SSBs has developed one hundred and eight (108) CBT curriculum at various levels on the NTVETQF. The current CBT programmes as at January 2023 are one hundred and eight (108). Additional one hundred and fifteen (115) CBT curriculum are under development.

Table 6.1: Contribution of SSBs towards Skills Development

No.	SSB	Number of CBT Curriculum developed	Number of CBT Curriculum under development
1.	Construction SSB	19	16
2.	Agricultural SSB	17	3
3.	ICT SSB	16	9
4.	Hospitality & Tourism SSB	5	9
5.	Renewable Energy SSB	2	1
6.	Healthcare SSB	0	0
7.	Pharmaceutical SSB	0	4
8.	Automotive SSB	5	5
9.	Oil & Gas	2	0
10.	Logistics & Transport SSB	0	0
11.	Textiles, Apparel & Garment	10	6
12.	Beauty & Wellness SSB	4	6

13.	Other Training packages	28	56
	Total	**108**	**115**

Source: CTVET Database, 2023

6.3.2 Role of SSBs in Workplace Experience Learning (WEL)

SSBs are an embodiment of industries which makes it easy to partner TVET Providers for the implementation of WEL. Some specific roles played by SSBs include.

i. Provide supervision for learners who undergo WEL.
ii. Provide opportunities for learners to acquire skills and competencies required by the programme.
iii. Ensure that skills and competencies required by the programme are assessed.
iv. Ensure results for WEL are communicated to the WEL coordinator.

6.4 Industry engagement in Dual TVET

The Commission in partnership with industry has rolled out the implementation of dual TVET in 2023/24 academic year. Nine (9) Technical and Vocational Institutes were identified and selected from 5 regions. The first phase of implementation started with 6 trade areas in partnership with various industries/companies with support from Sector Skills Bodies. More than 73 companies have expressed interest to participate in the implementation of Dual TVET.

The entry requirement Dual TVET post JHS. Learners will be admitted to level 3 (NC I) on the NTVETQF.

6.5 Industry engagement in policy development

The Commission collaborates with industry during the development of TVET, WEL, RPL, Enforcement and Apprenticeship policies. They also have provided input to the development of strategic plans for the TVET transformation in Ghana.

6.6 Challenges with Industry Engagement

The collaboration between the TVET sector and industry, even though has been positive, it comes with challenges, some of which include:

a. **Low Involvement of Industry in TVET:** While some industry experts are committed to implementing Workplace Experience Learning (WEL), others show limited interest in collaborating with the Commission, particularly in curriculum development. Similarly, some industries exhibit low involvement in admitting learners for WEL. Although some industries have legitimate reasons, the majority either fail to perceive the value proposition in WEL for their company or simply do not consider it necessary.
b. **Difficulty in Engaging Experts in Various Trade Areas:** Identifying experts in various trade areas proves challenging due to time constraints, lack of expertise, or, in some cases, a limited number of available experts.
c. Inadequate Resources for Coordinating SSBs' Activities: Industries incur financial losses when engaged by the Commission outside their regular work. The Commission for TVET (CTVET) lacks resources to remunerate experts at the same level as they would receive in the private sector. This constraint affects their participation in SSB and curriculum **development activities.**
d. High Pace of Technological Development Within Industries: Due to global competition, industries adopt technologies to remain relevant, often advancing at a faster pace than policy development and implementation.

CHAPTER SEVEN

TVET AND EMPLOYABILITY

7.0 INTRODUCTION

In this chapter, Technical and Vocational Education and Training (TVET) explores governmental interventions aimed at job creation. These measures directly respond to the findings and recommendations derived from a comprehensive skills gap analysis and audit conducted across ten key economic sectors.

TVET plays a pivotal role in enhancing employability by equipping individuals with practical skills and knowledge tailored to industry needs. A comprehensive skills gap analysis audit conducted by the Commission identified areas where there is a mismatch between the skills possessed by job seekers and those demanded by employers. This analysis informed targeted interventions aimed at bridging these gaps and promoting employability within the TVET space.

7.1 Skills Gaps Analysis Audit:

To effectively address skills gaps and promote employability in TVET, the Commission conducted a thorough analysis of the current labour market demands and the skills possessed by TVET graduates through data collection, with a focus on the One-District One-Factory Secretariat. This analysis involved:

- Identifying Industry Needs: Assessing the skills and qualifications demanded by employers across various sectors, including emerging industries and high-growth sectors.
- Evaluating TVET Curriculum: Reviewing the existing TVET curriculum to identify alignment with industry requirements and identifying areas for improvement or enhancement.
- Surveying Employers: Engaging with employers to gather insights into the specific skills and competencies they seek in potential employees, as well as any challenges they face in finding qualified candidates.
- Assessing Graduate Skills: Evaluating the skills, knowledge, and competencies possessed by TVET graduates to determine areas of strengths and weaknesses relative to industry demands.

- Analysing Market Trends: Examining current labour market trends, technological advancements, and economic developments to anticipate future skill requirements and adapt TVET programs accordingly.

7.2 Interventions for Job Creation

Based on the findings of the skills gap analysis audit, targeted interventions have been set for implementation to promote job creation and enhance employability within the TVET space. These interventions include:

- Curriculum Revision and Enhancement: Updating TVET curricula to ensure alignment with current industry needs and emerging technologies, thereby equipping students with relevant and in-demand skills.
- Industry Partnerships: Establishing partnerships with industry stakeholders to provide practical training opportunities, internships, and apprenticeships for TVET learners, facilitating smoother transitions into the workforce.
- Skill Development Programs: Implementing specialized skill development programs and short courses to address specific skills gaps identified during the analysis, such as technical skills, soft skills, and entrepreneurship training.
- Career Guidance and Counselling: Providing career guidance and counselling services to TVET students to help them make informed decisions about their career paths, identify opportunities for further education or training, and develop career plans aligned with their interests and strengths.
- Job Placement Services: Establishing job placement services and employment centres within TVET institutions to connect graduates with prospective employers, facilitate job matching, and support their transition into gainful employment.

Through a strategic and data-driven approach, TVET institutions and stakeholders are playing a critical role in equipping individual learners with the skills and competencies needed to thrive in the labour market and contribute to economic growth and development, promoting employability, and enhancing the quality of vocational education and training.

7.3 One District One Factory (1D1F)

One of the government interventions that is in line with the TVET transformation agenda for industrialization has been the 1D1F. The intervention has created 159,401 jobs across all sectors of the economy as shown in table 7.1.

Table 7.1: Jobs created under the 1D1F

Sector/ industry	Skills required	Interventions by the Commission to address the skills gap	Number of jobs created under 1D1F
Agro-Processing Food and Beverage production Livestock	Ability to: • Extract juices from fruit. • Extract oils from oil-bearing seeds, nuts, or fruits. • Mix, add ingredients such as pectin, sugar, spices, and vinegar to assist preservation and enhance texture, taste and appearance and flavors. • Package and label the containers as well as transporting the processed products to buyers. • Prepare the soil and sow, plant, tender and harvest field crops. • Grow vegetables, fruits and other trees and shrub crops. • Transfer preserved fruits to sterile jars, bottles, or other containers. • combine measures ingredients in bowls of mixing, blending, or cooking machinery. • Check the quality of raw materials to ensure that standards and sections are met. • Apply glazes icings, or other toppings to baked goods, using spatulas and brushes.	• SSB in Agriculture sector established. • Curricula developed in: Agro processing, Mango value chain, Pineapple, Cashew value chain, Oil palm value chain, Livestock, and Poultry.	98,268

	• Check the cleanliness of equipment and operation of premises before production runs to endure compliance with occupational health and safety regulations. • Monitor oven temperatures. and products appearance to determine baking times. • Monitor market activity and conditions (demand and supply), market potential, price at farm gate, retail, and wholesale levels, determining kinds and amount of stock produce and planning and coordinating production accordingly and evaluating records of farming activities. • Grow and Purchase feed and other supplies needed to maintain appropriate nutritional levels and condition of poultry. • Monitor and examining poultry to direct illness, injury, or diseases and to check physical condition such as weight gains and removing weak, ill poultry from the flock and consulting with the veterinary services for poultry health. • Mix feed activities and filling feed and water container. • Vaccinate poultry via drinking water, injecting, or dusting of air against diseases. • Determine sex of chicks and facilitation breeding, artificial insemination, and hatching eggs. • Rent or reinvent and maintain and clean farm buildings machinery, equipment, and structures. • Slaughter and dress poultry for sale or delivery to the market. Promote and market products, arranging the sale, purchase and transportation of produce and supplies and maintaining g and evaluating records of farm transactions.		
Wood processing	Ability to operate and monitor: • log -in- feed and conveyor system.	• Curricula developed in:	9,800

	• head saws, resews and multiblade saws to saw logs, cants, flitches, slabs, or wings and remove rough edges from sawn timber. • machines which cut veneer. • plywood core-laying machine and hot-plate plywood presses. • plywood chippers and grinding machines which reduce logs to pulp. • digesters which produce pulp from materials such as wood, rags, esparto, straw, or scrap paper. • machines which bleach wood pulp, rags, esparto, stew or scrap-pulp and scrap paper. machines which mix, beat and hydrate pulp and other ingredients to prepare stuff for making paper.	Wood Construction Technology	
Vehicle Production/Spare parts	Ability to: • Maintain make and repair jigs, gauges, fixtures, using hand tools and various kinds of machine tools. • Make engines or machinery components and parts thereof. • Fit and assemble parts to make and repair jigs, fixtures, and gauges! • Repair and modify sports guns and other small parts. • Make, fit, assembly, repair and install lock parts and locks. • Make repair metal patterns for preparation of foundry molds. Lay out lines and reference points on metal stock to guide other workers who cut, turn, mill, grind out otherwise shape metal.	• SSB established in Automotive Sector • Curriculum developed in: Automotive Mechanics, Automotive Engineering Technology	7,609
Construction	Ability to: • Monitor the flow of clay and other raw materials and products into machine, ND adjusting, valves and controls to specifications.	• SSB established for the Construction Sector	9,975

	• Position clay and stone on machines to be cut and worked. • Operate concrete mixing, stacking and splitting machines. • Set up and install molds and other machine fixtures. • Set-up and operate glass- making machines to produce molten glass. • Press and blow glass into molds to form glassware products. • Collect and examine samples for conformity to specifications and adjust machine settings. Use hand tools to cut, inscribe and polish roughly hewn stone to finished condition	• Curriculum developed in: Building Construction Technology, Bio-digester Construction	
Electricals and Electronics production/installation	Ability to: • Install, maintain, fit, and adjust electrocaloric wiring systems. machinery and equipment. • Examine blueprints, wiring diagrams and specifications to determine sequences and methods of operation. • Inspect and test electronics systems, equipment, cables, and machinery to identify hazards, defects and the need for adjustment or repair. Install, maintain, and repair electronic transmission lines, joining electrical cables	• Curriculum developed in: Electrical Installation, Electronics, Electronic Engineering Technology, Electrical Engineering Technology	480
Pharmaceuticals/ Detergents Oil production	Ability to: • Regulate or shut down equipment during emergencies as directed by superior personnel. • Start-up pumps and rinse reactor vessels to exhaust gases and vapours to regulate the flow of oil, steam, air, and perfume to towers, and to add products to converter or blending vessels. • Turn valve to regulate flow of products or by-products through agitator tanks, storage, drums, or neutralizer tanks.	• SSB for Pharmacy was established. • Curriculum for Medicine Counter Assistants, Pharmaceutical Manufacturing Process,	996

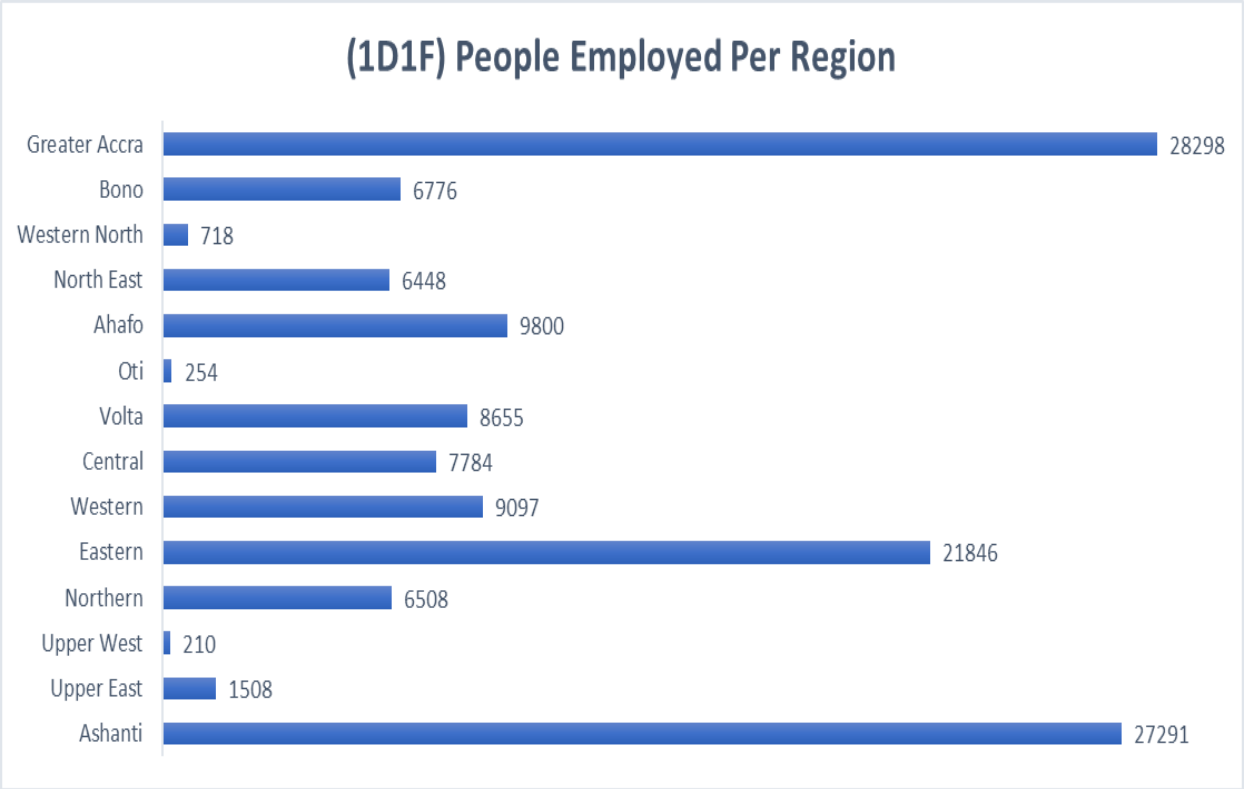
	• Defrost frozen valves, using steam horses. • Direct workers operating machines that regulate flow of materials and products. • Inspect operating units such as towers, soap-spray storage tanks, scrubbers, and driers to ensure that all are functioning and to maintain maximum efficiency. • Control and operate chemical processes or systems of machines using panel boards or semi-automatic equipment. • Draw samples of products and conduct quality control tests to monitor processing and to ensure that standards are met. • Gauge tanks levels using calibrated rods. • Interpret chemical reaction visible through sight glass or television monitors and review laboratory test reports for processes adjustments. recording instruments, panel lights and other indicators and to listen for warning signals to verify conformity of process conditions. • Move control settings to make necessary adjustments on equipment units affecting speeds of chemical reactions, quality, and yields. • Notify maintenance, stator-engineering and other auxiliary personnel to correct malfunctions and to adjust power stem, water, or air supplies. • Patrol work areas to ensure that solutions in tanks and troughs are not in danger. Record operating data such as proceed conditions, test results and instrument readings.	Pharmaceutical Techniques, are under development.	

Source: 1D1F Secretariat, Ministry of Trade and Industry, 2023.

7.4 1D1F Employment per Region

The employment data collected indicates that the Greater Accra region registered the highest number of individuals employed under the 1D1F Initiative, totalling 28,298. Following closely behind are the Ashanti region with 27,291 employed individuals and the Eastern region with 21,846 individuals documented. Additionally, the Ahafo, Western, and Northern regions contributed to employment figures with 9,800, 9,097, and 6,508 individuals, respectively.

Figure 7.1 Number of people employed per region under 1D1F



Source: 1D1F Secretariat, Ministry of Trade and Industry, 2023.

From Figure 7.1, the Central region accounted for 7,784 employed individuals, with Volta recording 8,655 and the Upper East recording 1,508. Conversely, the Upper West region had the lowest employment rate, with the Oti and Western North regions recording 210, 254, and 718 employed individuals, respectively.

CHAPTER EIGHT

GREENING TVET

8.0 INTRODUCTION

The pursuit of greening involves acquiring knowledge and adopting practices that promote ecological awareness, leading to improved decision-making and lifestyle choices. This intentional effort towards eco-friendliness holds the potential to safeguard the environment and ensure the sustainable use of natural resources for both present and future generations (UNESCO-UNEVOC, 2017). At the national level, the Environmental Protection Agency (EPA) is the foremost governmental entity responsible for safeguarding and enhancing Ghana's environment. The Agency has established plans for fostering skill advancement and laid down measures for green skills and environmental sustainability.

Greening Technical and Vocational Education and Training (TVET) emerges as a critical and pervasive subject essential for achieving long-term sustainable development goals. It encompasses initiatives aimed at reorienting and strengthening existing TVET institutions and policies to advance sustainable development objectives. In this context, greening TVET recognizes the intrinsic link between sustainable development and environmentally conscious progress. Furthermore, it seeks to elucidate the diverse interpretations of green employment and green skills (Majumdar S. 2010).

The global recognition of the significant benefits associated with greening practices has underscored the need to assess the status of greening initiatives in Ghana, as evidenced by the inclusion of this topic in the second edition of the Ghana TVET report. This chapter aims to provide deeper insights into the prevailing greening practices embraced by TVET institutions in Ghana. One of its objectives is to spotlight and analyse the ongoing efforts and initiatives spearheaded by the 231 training institutions involved in promoting ecological awareness and sustainable development.

Various aspects of greening are addressed within this framework, encompassing resource conservation, renewable energy utilization, and the cultivation of green jobs and skills. These initiatives include practices such as recycling, reusing, and reducing to conserve resources

effectively. Additionally, the adoption of renewable energy sources such as solar and wind power is emphasized as integral to greening efforts in the TVET sector.

8.1 Intervention by the Commission to Promote Greening

Some of the interventions by the Commission to promote greening include the following:

- Trained 60 TVET Institutions to develop institutional greening plans. They were taken through various approaches on how to make their environment green for sustainable development.
- Collaborated with the Ministry of Employment and Labour Relations and the National Development Planning Commission to develop the National Greening Strategy and the National Greening Policy.
- Developed curriculum to support green skills development. The list of Competency-Based Training (CBT) packages developed for green skills development is presented in Table 8.1.

Table 8.1: List of CBT Packages developed for Green Skills Development

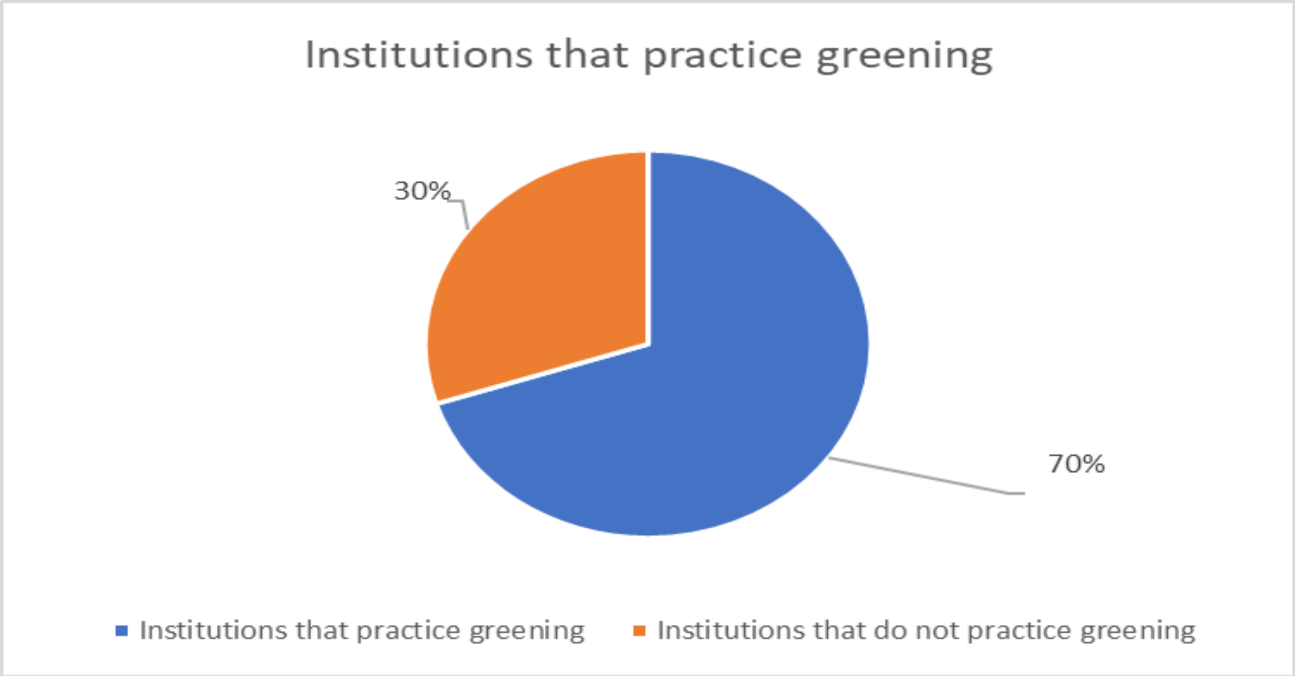
Competency Based Training Packages	**Level on NTVETQF**	**Status**
Solar energy systems technology	NP I, NP II	Available
Solar Photo Voltaic Technology	NC I	Available
Bio-digester Construction	NC I	Available
Bio-digester Construction	NC II	Available
Renewable Energy Technology	HND	Available
Waste Management and processing Technology	NC I, NC II	Available
Environmental Sanitation Technology	NC I, NC II	Available
Recycling Technology	NC I, NC II	Under development
Environmental Sanitation and Waste Management Technology	HND	Available

Source: CTVET Database, 2023

8.2 TVET Institutions that Practice Greening

The survey aimed to gain insights into TVET institutions that embrace greening practices. Based on the data collected, it is evident that a significant number of institutions actively engage in greening practices to reduce environmental pollution and conserve vital resources such as electricity and water. Figure 8.1 visually presents these findings.

Figure 8.1: Institutions that practice Greening



Source: CTVET Field survey, 2022

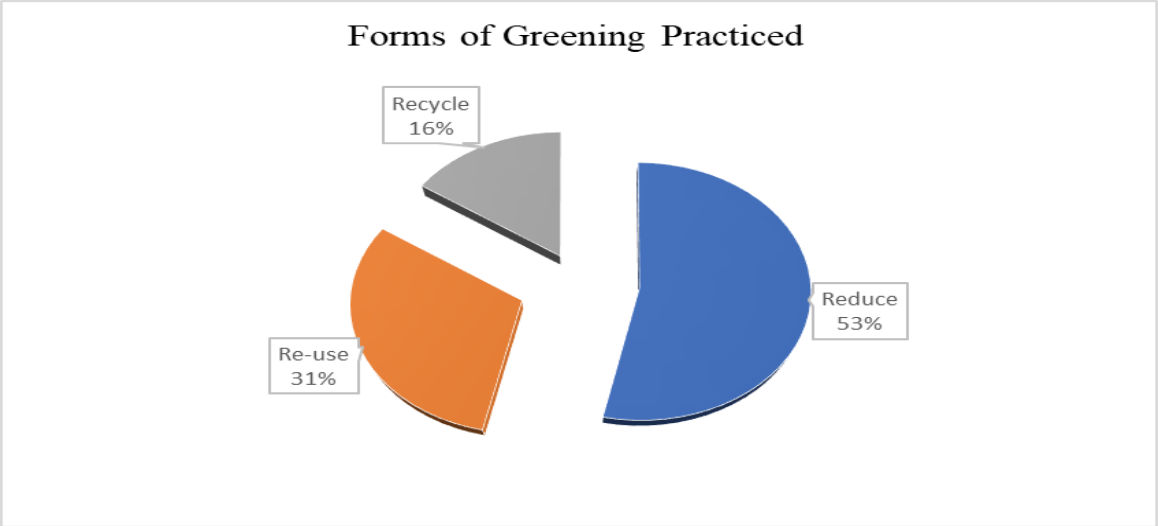
Figure 8.1 illustrates that 70% out of 231 training providers (respondents) stated that they do practice greening. The remaining 30% indicated that they do not practice any form of greening. Comparatively, the number of training institutions that practice greening increased slightly from 63.9% in 2021 (out of 85 respondents) to 70% as of 2023. This can be attributed to the sensitization workshop on greening organized by the Commission.

8.3 Types of Greening Practiced by Institutions

A subsequent inquiry was about the type of greening methods that are practiced by institutions.

Figure 8.2 illustrates the types of greening methods practiced by institutions.

Figure 8.1 Forms of Greening Practiced.



Source: CTVET Field survey, 2022

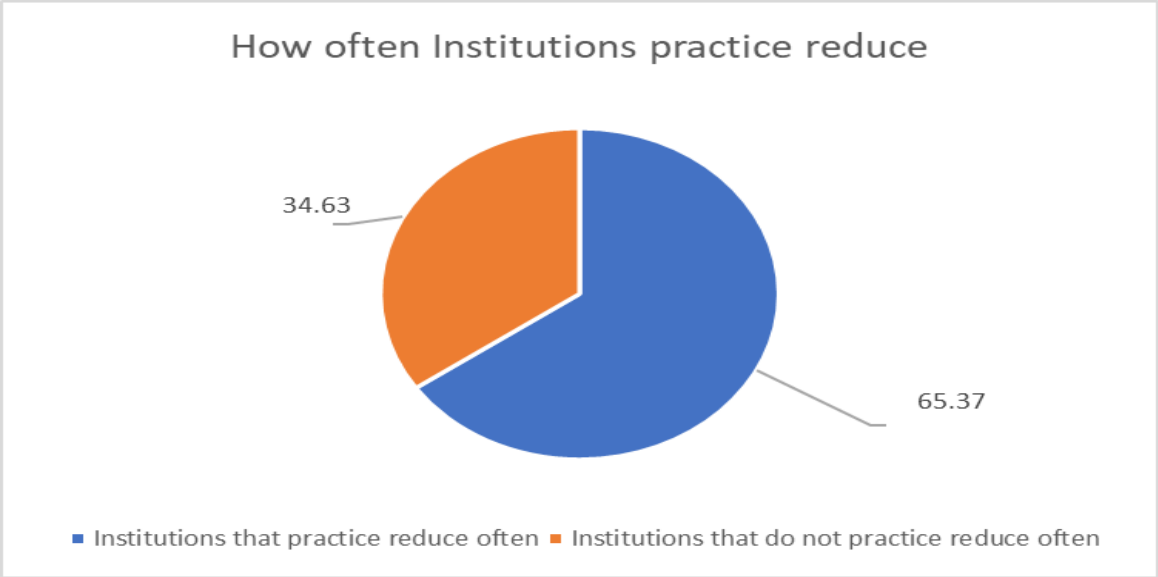
Out of the total responses, 53 % of the institutions indicated that they practice “reduce”. Of all the institutions that provided responses, 31 % mentioned that they practice “re-use”, while 16 % of the institutions indicated that they practice “recycle”.

8.4 “Reduce” as a form of Greening

The participants were requested to indicate how often they practice "reduce" as a greening technique. The survey data reveals that the majority of respondents practice "reduce" as a form of greening. Figure 7.3 provides clear insight into the responses.

According to the chart, 65.37% of the respondents mentioned that they often practice "reduce" as a form of greening. On the other hand, 34.63% said they do not practice "reduce" as a form of greening at all. The current data shows a significant increase in the number of training institutions that practice "reduce" as a form of greening. In 2021, out of the 85 respondents (training institutions), only 4.7% of them reported that they practice "reduce". In 2023, however, out of 231 respondents, 65.37% reported that they practice "reduce".

Figure 8.3: Institutions that practice" Reduce"



Source: CTVET Field survey, 2022

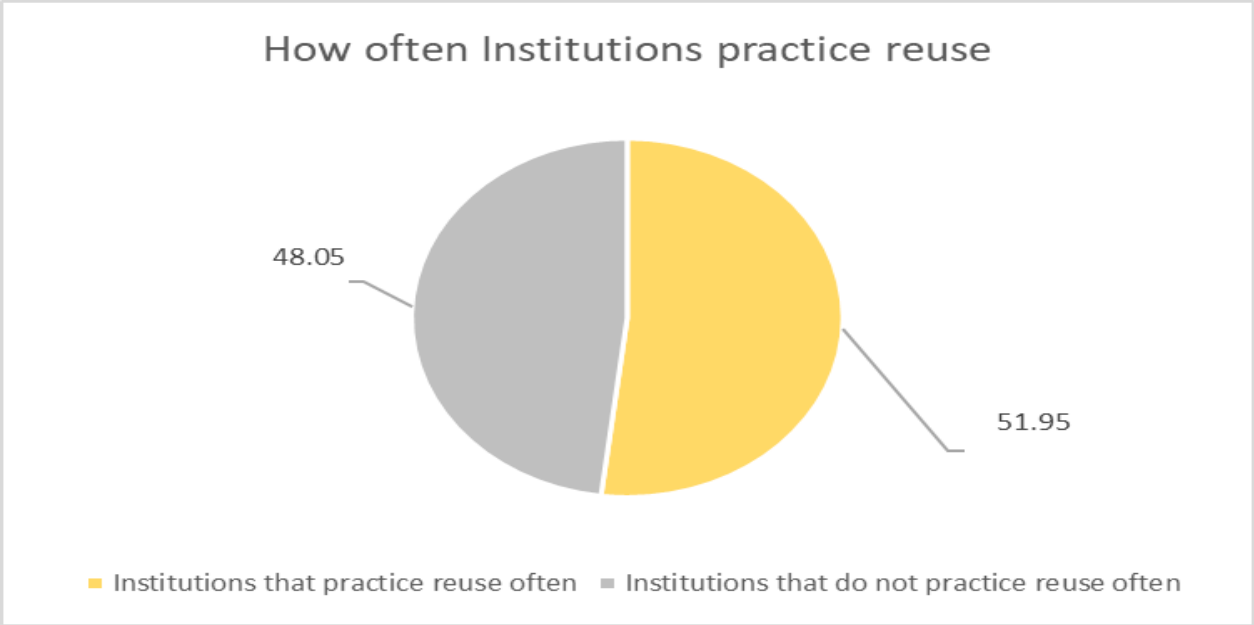
"Reduce" refers to the decrease or minimal usage of things that promote high carbon footprints and negatively affect the environment (Rahman & Wright, 2014). From the survey, it was noted that institutions were reducing their waste output through turning water taps off when not in use and using energy efficient light bulbs like LEDs as instead of illuminant bulbs. Other ways they were reducing waste was through turning electrical appliances and lights that were not in use off.

8.5 "Reuse" as a form of Greening

The respondents were asked to indicate how often they practice "re-use" as a form of greening. The survey shows that most of the respondents often practice "re-use," as shown in Figure 8.4.

According to the figure, 51.95% of the institutions often practice "re-use". About 48.05% of the respondents mentioned that they do not regularly practice "re-use". "Re-use" is the practice of using items multiple times to prevent waste. It is typically done to reduce costs and harmful environmental impacts (Rahman & Wright, 2014).

Figure 8.4: Institutions that practice "Re-use"



Source: CTVET Field Survey, 2022

The forms of "reuse" practiced by institutions include:

- Using sawdust as fuel for cooking.
- Composting organic waste.
- Utilizing excess and pieces of fabric from the Fashion Department for making pillows and doormats.
- Reusing dirty oil from the Mechanical and Automotive Department for wood preservation.

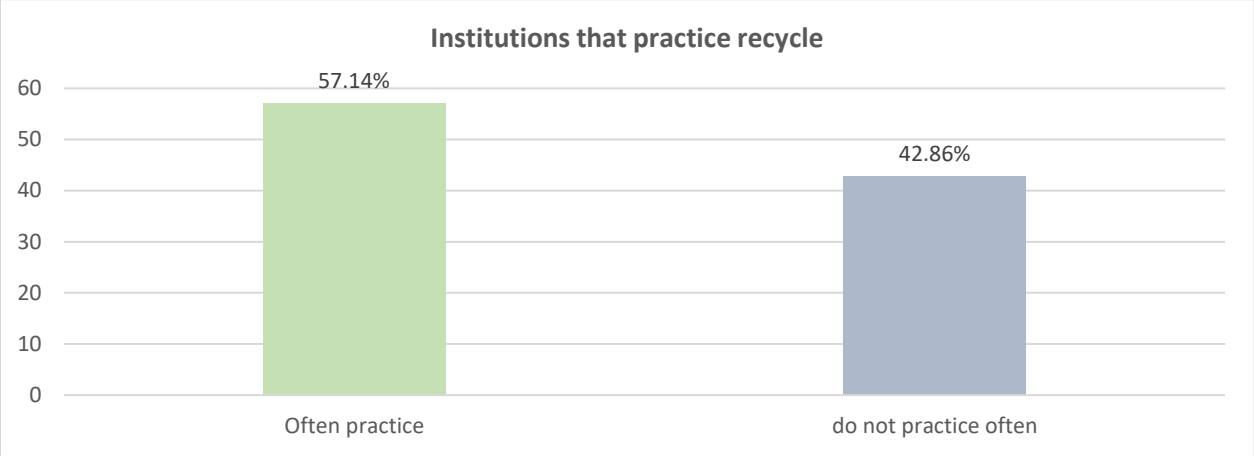
8.6 "Recycle" as a Form of Greening

The respondents were asked to give insight on how often they practice "recycle". The data from the survey depicts that, majority of the Institutions practice "recycle", see figure 8.5.

From the data, 57.14 % of the Institutions said they often practice "recycle" whereas 42.86 % indicated that they rarely practice "recycle". Between 2021 and 2023, there has been an increase in the number of institutions that practice "recycle". Of the 85 respondents in 2021, 35.3 % indicated that they regularly practice "recycle". In 2023, however, out of the 231 respondents, 57.14 % of them reported that they regularly practice "recycle" as a form of greening. "Recycle"

is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products (Rahman & Wright, 2014).

Figure 8.5: Institutions that practice" Recycle"



Source: CTVET Field survey, 2022

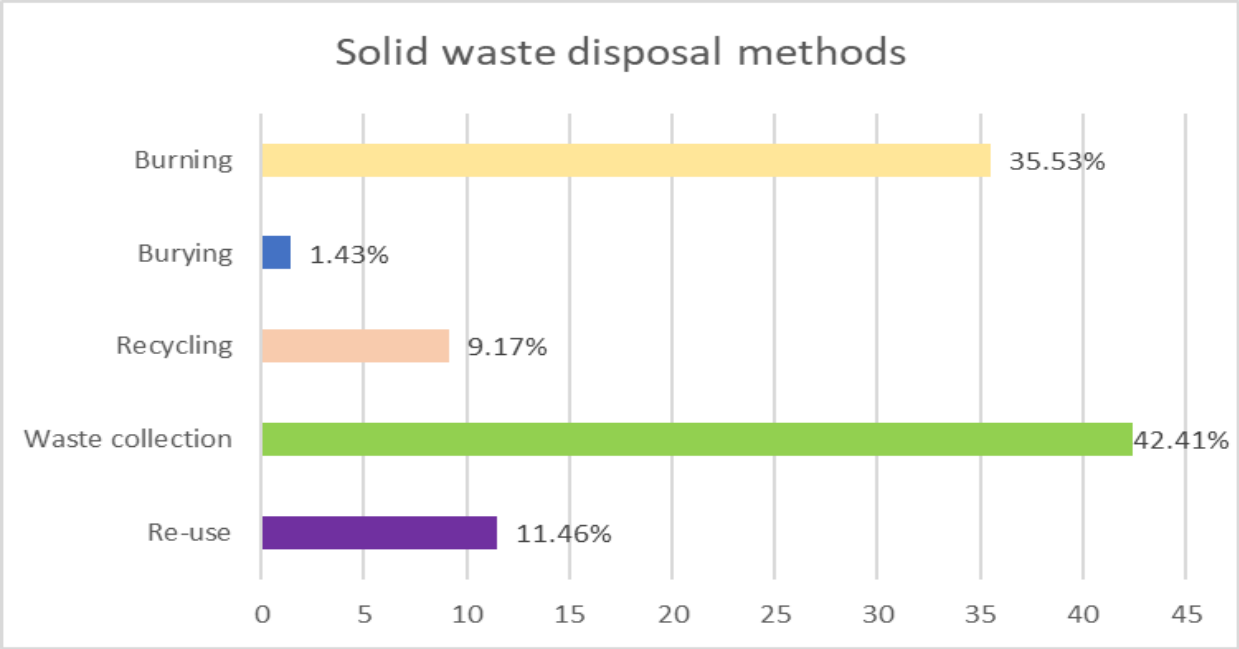
Various Institutions reported that they practice waste segregation to facilitate possible recycle. For instance, plastics, metals and paper wastes are separated and sold to processing companies. This waste segregation is important to eliminating pollution that comes from the traditional way of burning plastics, metals and papers.

8.7 Solid Waste Disposal Approaches

The survey result shows that the most common mode of solid waste disposal is through refuse collection by refuse vehicles and burning. Figure 8.6 illustrates the various disposal methods.

About 42.41% of respondents disposed of solid wastes through the collection method (thus, waste collection trucks and tricycle operators). The proportion of respondents that practice burning as a method of solid waste disposal is relatively high (35.53%) compared to those who practice recycling (9.17%) and burying (1.43%). Burning is common among respondents in rural areas, possibly due to limited access to waste collecting companies. However, in urban areas, the majority (42.41%) of respondents rely on waste collectors to dispose of their solid waste.

Figure 8.6: How institutions dispose their solid waste



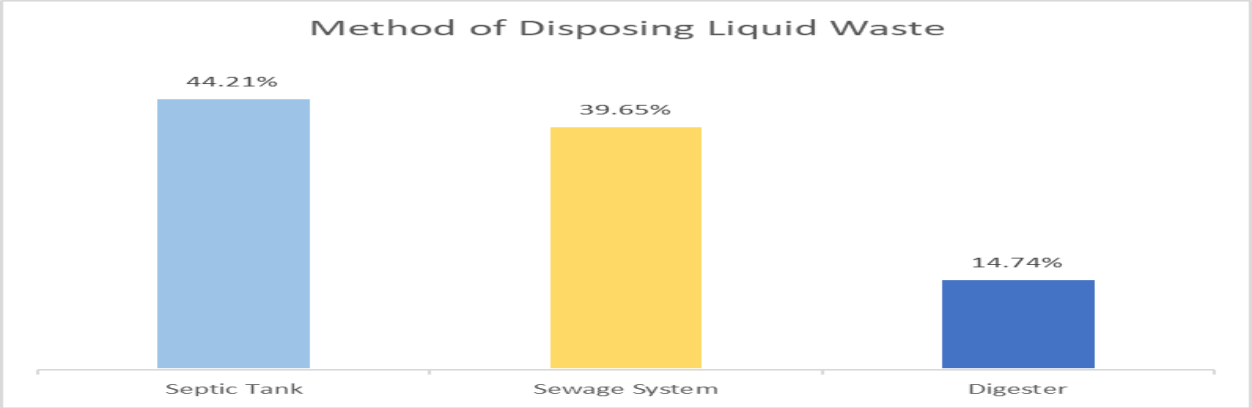
Source: CTVET Field survey, 2022

8.8 Liquid Waste Disposal

Figure 8.7 outlines the various methods of liquid waste disposal used in the Training Institutions. The use of septic tanks is the most employed technique for managing liquid wastes in the Institutions. A few other Institutions mentioned that they dispose of liquid waste through sewage systems and biodigesters.

About 44% of the respondents use septic tanks as a means of liquid waste disposal. The use of sewage systems (39.65%) for liquid waste was common among training providers located in urban areas.

Figure 8.7: Method of Disposing Liquid Waste



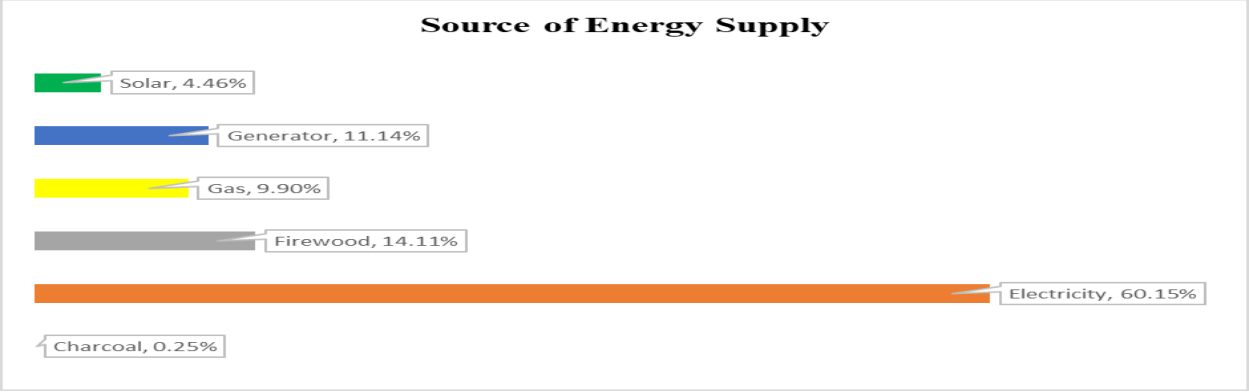
Source: CTVET Field Survey, 2022

8.9 Source of Energy Supply

The survey collected data on the sources of energy for the training institutions as illustrated in Figure 8.8.

Out of the total responses, 60.15% of the respondents stated that they rely on the Electricity Company of Ghana for their energy needs, which is consistent with the most common source of energy supply in Ghana. Whereas 14.11% of the respondents mentioned that they use firewood as their source of energy supply. Less than 5% of the Institutions indicated that they use renewable energy (solar) as their source of energy.

Figure 8.8 Sources of Energy Supply

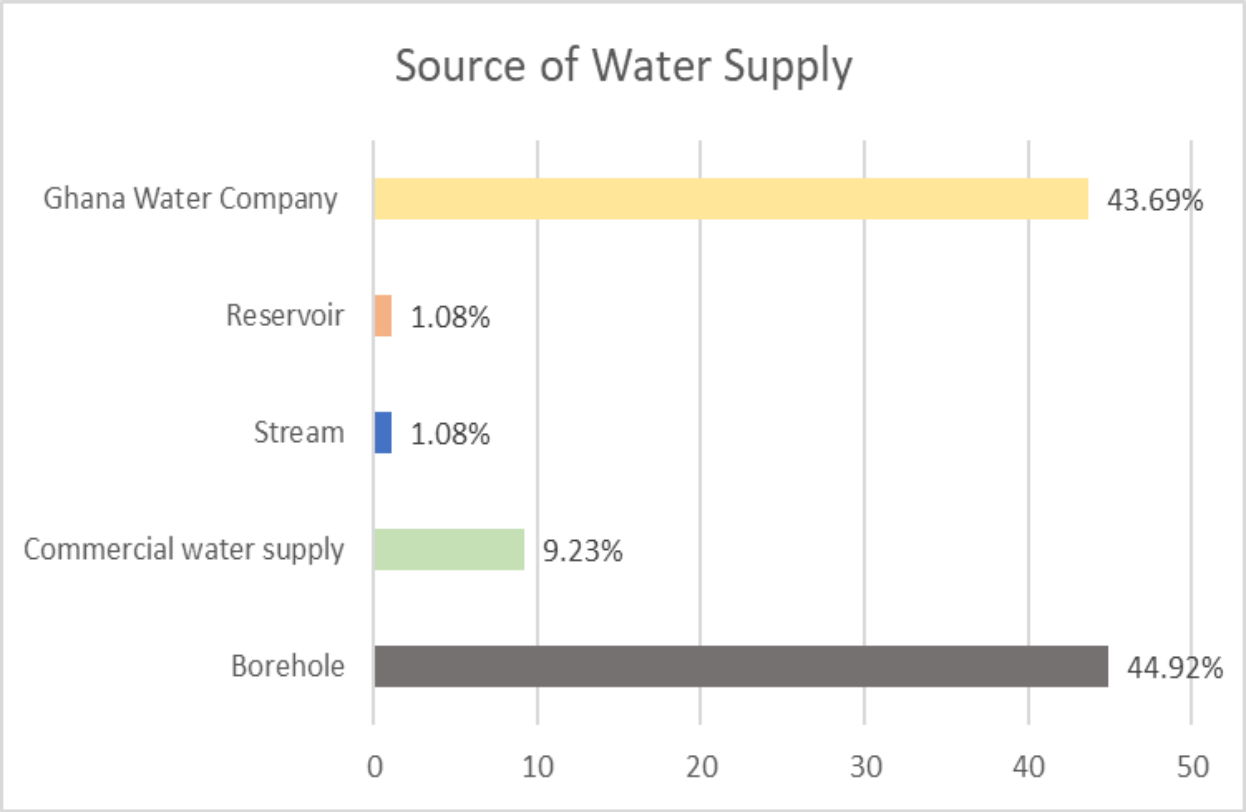


Source: CTVET Field survey, 2022

8.10 Sources of Water Supply

The main sources of water supply for institutions are from pipe borne and borehole. Both sources of water are adequate and safe for use and do not bring about any harm or disadvantage to the environment. Figure 8.9 provides detailed information on the sources of water supply.

Figure 8.9: Source of Water Supply

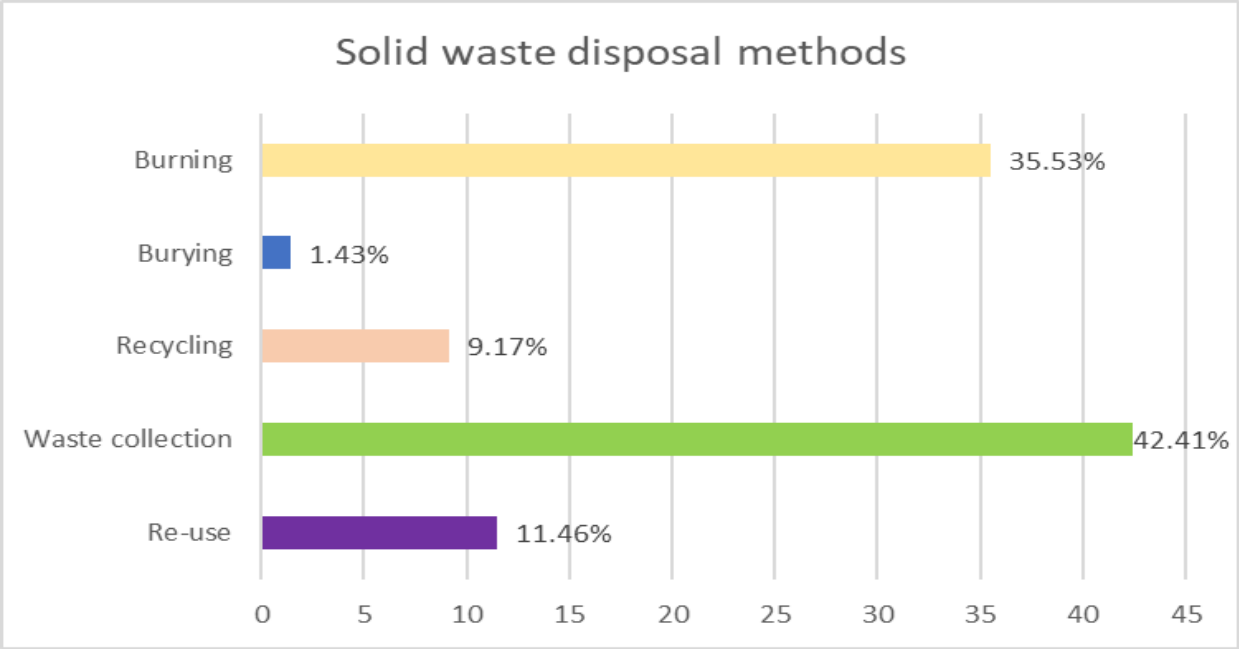


Source: CTVET Field Survey, 2022.

8.11 Solid Waste Disposal

For solid waste disposal, approximately 42.41% of respondents dispose of solid waste through collection methods, such as waste collection trucks, and tricycle operators. The proportion of respondents practicing burning as a method of solid waste disposal is relatively high (35.53%), compared to those who practice recycling (9.17%) and burying (1.43%). Burning is common among respondents in rural areas, possibly due to limited access to waste collection companies. However, in urban areas, the majority (42.41%) of respondents rely on waste collectors to dispose of their solid waste.

Figure 8.10 Solid Waste Disposal Method



Source: CTVET Field Survey, 2022.

CHAPTER NINE

TVET FINANCE

9.0 INTRODUCTION

The TVET finance chapter comprehensively outlines various funding mechanisms associated with Technical and Vocational Education and Training (TVET) programs within Ghana's education systems. These mechanisms encompass government funding, institutional financing, learner funding, public-private partnerships (PPP), and efforts toward resource monitoring, transparency, and accountability efficiency.

The imperative role of financing in enhancing TVET delivery is highlighted, acknowledging the persistent challenges faced globally and the specific hurdles encountered in Ghana's pursuit of positioning TVET as a focal point for growth in alignment with Sustainable Development Goals 4 and 8. The government has adeptly implemented innovative strategies to address these challenges, contributing to the advancement of TVET quality and delivery.

Key financing strategies include government subventions, cost-sharing initiatives, support from development partners, internally generated funds derived from institutional production units and consultancy services, as well as collaborative funding initiatives with the private sector. These multifaceted approaches collectively play a significant role in elevating the standards of TVET.

Funding for TVET programs typically emanates from various sources, including the government's annual budget allocation to the education sector, direct financial support from development partners, technical support from both development partners and the private sector or industry (SSBs), competitive grants for skills development and TVET delivery, partnership arrangements with key industry players, and the implementation of the TVET Voucher system. These diverse funding sources underscore the comprehensive and collaborative approach adopted to bolster TVET in Ghana.

9.1 Sustainable TVET Financing

The financing of Technical and Vocational Education and Training (TVET) poses a higher cost compared to traditional education. Within the TVET sector, various cost components encompass

infrastructure provision, tools and equipment, consumables for practical work, research, and curricula development. The TVET finance chapter is designed to delineate sustainable funding methods that ensure equitable access to TVET across all levels and facilitate the effective utilization of resources.

Sustainable financing in the context of TVET entails the establishment of a financial system that supports the long-term viability and effectiveness of TVET delivery systems and initiatives, taking into consideration socio-cultural, economic, and environmental impacts. TVET plays a crucial role in learning and skill acquisition, focusing on imparting knowledge, fostering the right attitudes, and providing practical skills in specific areas.

The overarching goal of sustainable TVET financing is to overcome the challenges and financial constraints frequently encountered by TVET institutions. These challenges may manifest as outdated technology, insufficient resources, inadequate infrastructure, and funding shortages. Sustainable finance strategies are crafted to systematically address these issues, creating conditions that enable relevant TVET programs and initiatives to thrive and keep pace with the current economic and technological landscape.

9.2 Guiding Principles for Sustainable Financing Mechanisms

Sustainable financing for Technical and Vocational Education and Training (TVET) is underpinned by key guiding principles. First, there is a need for long-term planning and commitment from all stakeholders involved. This commitment ensures continuity and stability in funding strategies. Diversification of funding sources at all levels is crucial, emphasizing the importance of tapping into a variety of financial channels. Efficient resource utilization is another core principle, emphasizing the need to make the most effective use of available resources.

Collaboration with the private sector is deemed essential for sustainable TVET financing. This collaboration opens avenues to access additional resources, engage experts, and provide learners with opportunities to gain practical work experience. Equity and inclusiveness are paramount, emphasizing the importance of providing equal opportunities for all.

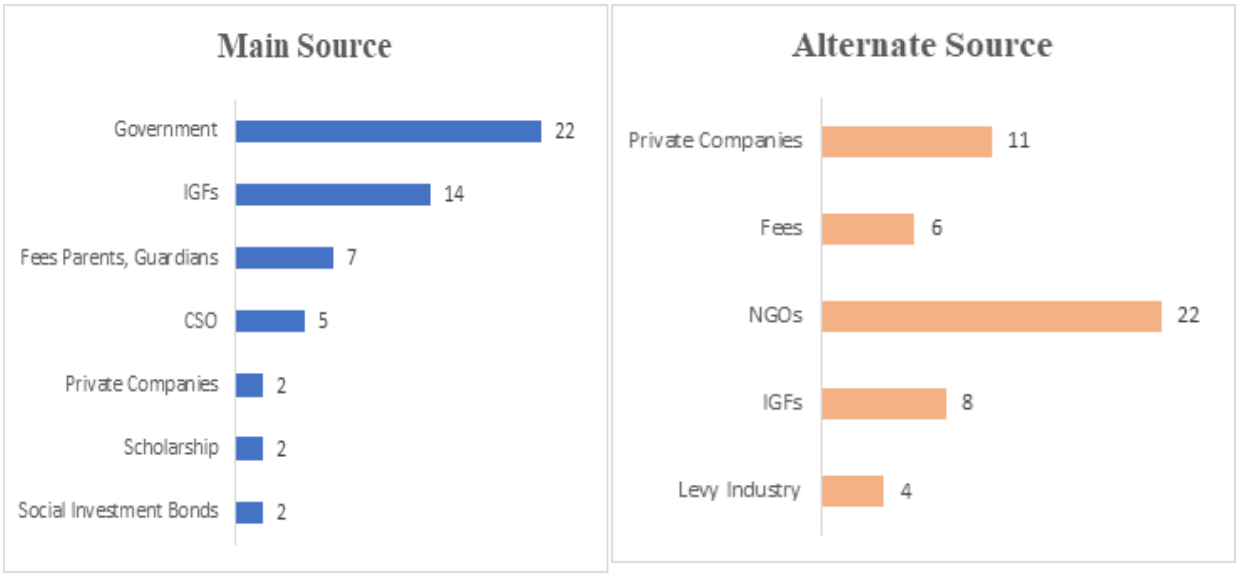
Investments in modernized tools and equipment, the development of relevant green curricula, and continuous professional development for facilitators are highlighted as critical components. These measures enable TVET institutions and centres to align with the dynamic demands of the labour market, evolving technologies, industries, and market trends.

Data from various sources, including the Ghana Education Trust Fund (GET Fund) and other pertinent research in the field of TVET financing, will be a focal point in this section, shedding light on critical insights and informing decision-making processes.

9.3 Sources Fund for TVET Financing

TVET funding in Ghana is derived from diverse sources, categorically grouped into Government sources, scholarships, Internally Generated Funds (IGFs), Civil Society Organization (CSO) contributions, support from parents/guardians, and social investment bonds. These funding channels collectively play a pivotal role in facilitating the delivery of high-quality skills development in the country. Figure 8.1, sourced from Amponsah E. & Spencer K. (2022), provides a comprehensive breakdown of the various financing sources for TVET in Ghana from sixty-eight (68) people interviewed.

Figure 9.1: Sources of fund for TVET financing



Source : Amponsah E. & Spencer K., (2022)

As depicted in Figure 8.1, the primary contributors to TVET funding include the Government, IGFs, fees, CSO, scholarships, and social investment bonds. The government emerges as the predominant financier, with a notable 57.14% higher contribution compared to the next most substantial funding source for TVET education. Among the sixty-eight respondents, seven

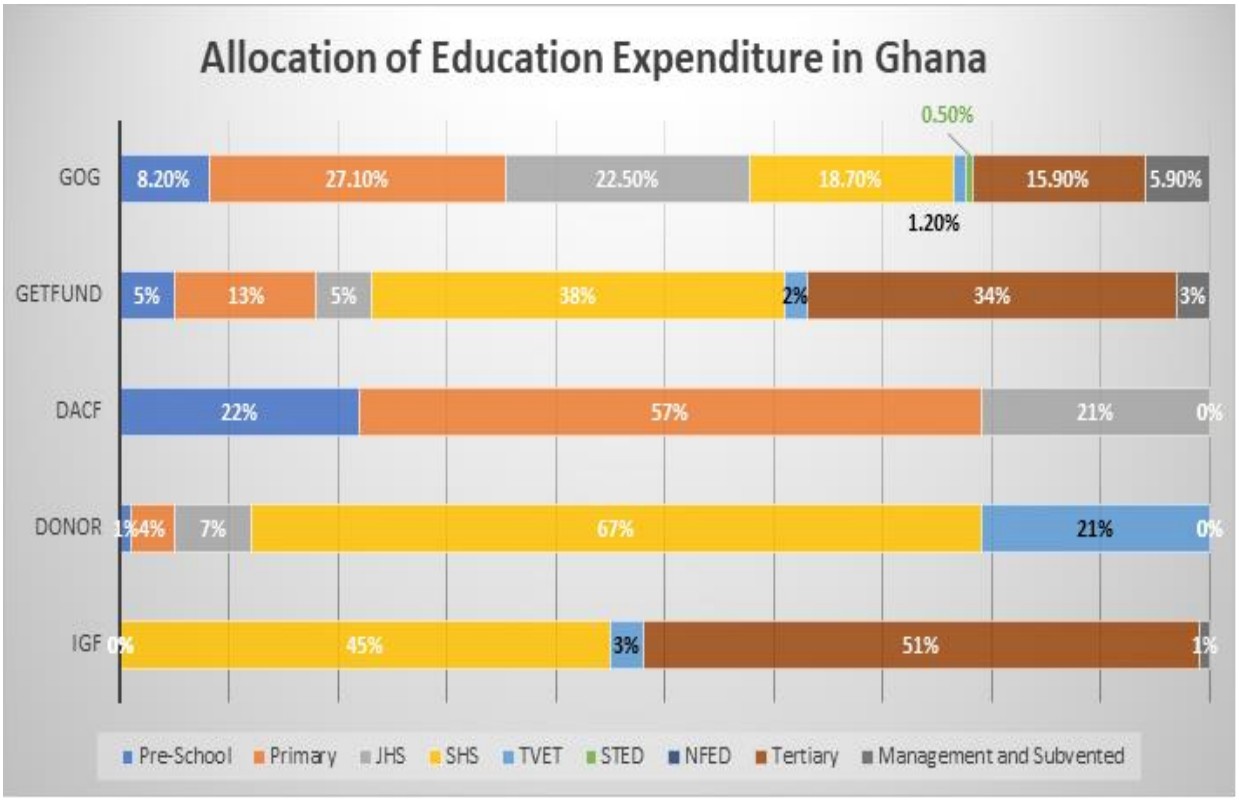
highlighted fees from parents and guardians, five mentioned CSOs, while private companies, scholarships, and social investment bonds each garnered two selections.

The survey results also indicate that NGOs emerged as a significant alternative funding source, securing twenty-two selections, and surpassing the least selected option, which was levy industry (4 selections), by a notable 4.50%. The breakdown further reveals that 36.67% of respondents selected private companies, 20% selected fees, and 26.67% selected IGFs as viable funding options. This comprehensive analysis underscores the multifaceted nature of TVET financing in Ghana, with government funding playing a central and substantial role in sustaining the sector.

9.4 Allocation of Education Expenditure in Ghana.

Education expenditure in Ghana is systematically allocated to various institutions, sectors, and agencies under the purview of the Ministry of Education. The accompanying graph illustrates the diverse allocations for education expenditure in the country.

Figure 9.2: Allocation of education expenditure in Ghana (2017)



Source: Amponsah E. & Spencer K., 2022

Both traditional and Technical and Vocational Education and Training (TVET) costs in Ghana are borne by the government, as indicated by Amponsah E. and Spencer K. in 2022. According to the Education Performance Report of 2018, the primary sources of funding for educational activities encompass the Government of Ghana (GoG), the Ghana Education Trust Fund (GET Fund), the District Assembly Common Fund (DACF), Donors, and Internally Generated Funds (IGF).

As per the GoG's report in 2017, the education sector in Ghana benefits significantly from public support, with TVET receiving an average of 1.2% of the entire education budget. Further, TVET secures 2% of the total budget from GET Fund. Donor contributions constitute approximately 21% of the overall TVET expenditure, with a comparatively modest 3% attributed to Internally Generated Funds.

The higher cost of TVET compared to traditional education poses challenges for the government in providing state-of-the-art technology, machinery, and laboratories to Training Providers, as highlighted by Amponsah E. and Spencer K. in 2022. This financial disparity underscores the difficulty faced in equipping TVET programs with innovative resources, emphasizing the need for strategic funding allocation and considerations for the distinct requirements of TVET in Ghana's education landscape.

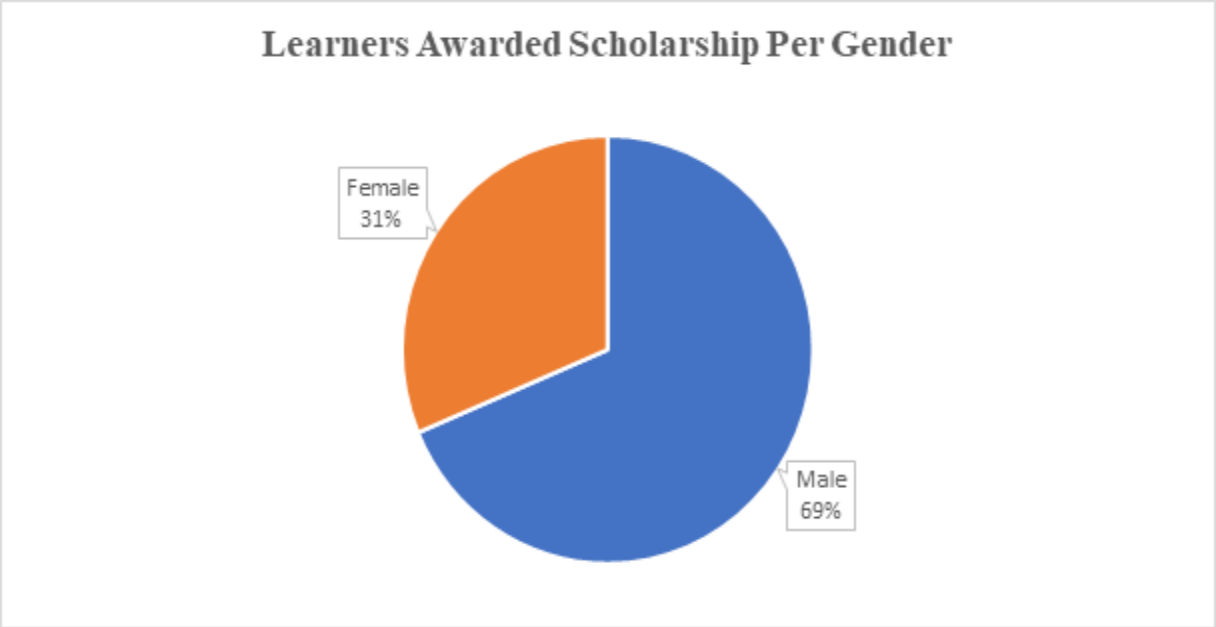
9.5 Interventions for TVET Financing

9.5.1 Scholarships

Scholarships are granted to university learners pursuing knowledge in Technical and Vocational Education and Training (TVET), with the Ghana Education Trust Fund (GET Fund) serving as the awarding agency. These scholarships are specifically designated for students within a particular economic category and are accessible across all disciplines.

As per available data, a total of eighty-three learners have been recipients of GET Fund scholarships, encompassing diverse fields of study. Figure 9.3 provides insights into the gender distribution of these scholarship recipients as of May 2023.

Figure 9.3: Shows the Gender Distribution of Scholarship Recipients as of May 2023



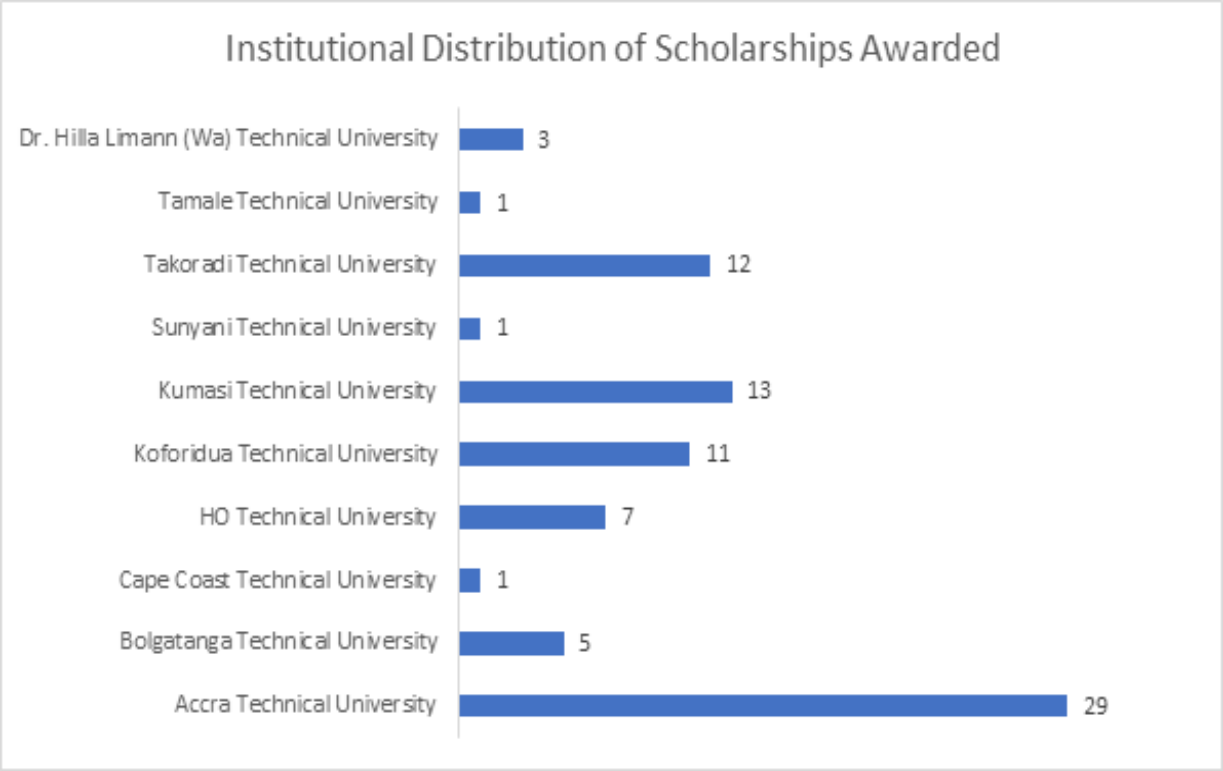
Source: Ghana Education Trust Fund (GETFund)

Eighty-three (83) learners who were awarded GETFund scholarships, 31% are females, while the remaining 69% are males. This gender distribution highlights the diversity among scholarship recipients and emphasizes the importance of fostering equal opportunities for both male and female learners in the pursuit of education and skills development within the TVET framework.

9.5.2 Institutional Distribution of Scholarship Awarded 2021 – 2023

Figure 9.4 illustrates the ten Technical Universities that have received financial support from the GETFund. These universities play a crucial role in advancing TVET in Ghana, contributing significantly to the development of skilled professionals across various sectors.

Figure 9.4 Total number of learners awarded scholarship in the ten (10) Technical Universities in Ghana



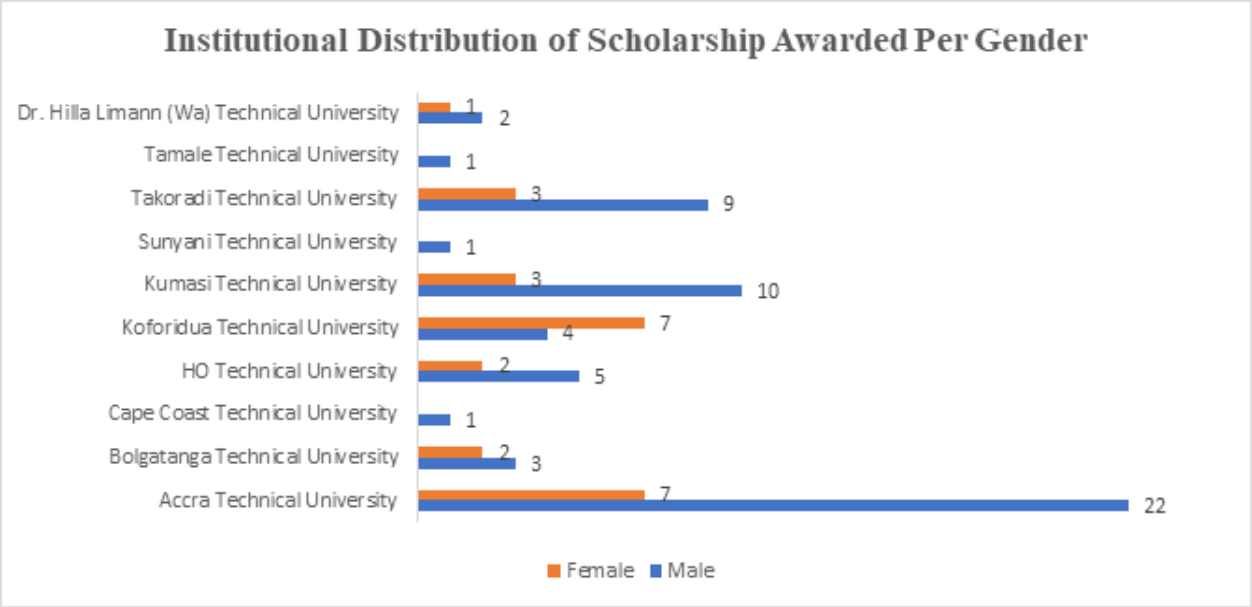
Source: Ghana Education Trust Fund (GETFund)

The data reveals that learners from all ten technical universities have benefited from scholarship support provided by the GET Fund during the period spanning from 2021 to July 2023. Among these technical universities, Accra Technical University stands out with the highest number of scholarship recipients, totalling twenty-nine (29) learners across various courses. Kumasi Technical University is the second technical university with thirteen (13) learners awarded scholarships, while Takoradi Technical University with twelve (12) of its learners receiving this educational support. This distribution underscores the widespread impact of GET Fund scholarships, highlighting how learners across different technical universities in Ghana have been afforded financial assistance to pursue their education and training.

9.5.3 Institutional Distribution of Scholarship Awarded by Gender

The graph below illustrates the ten Technical Universities that have received financial support from the GETFund in terms of gender.

Figure 9.5. Institutional distribution of learners awarded scholarship in the ten (10) Technical Universities in Ghana



Source: Ghana Education Trust Fund (GETFund), 2023

The data analysis indicates a notable gender disparity in the distribution of scholarships between 2021 and July 2023, with a higher percentage of male recipients (69%) compared to female recipients (31%). This trend is evident across various technical universities.

Taking Accra Technical University as an example, out of the twenty-nine (29) scholarship beneficiaries, twenty-two (22) were males, and seven were females. A similar distribution pattern is observed in other institutions such as Kumasi Technical University, where ten (10) males received scholarships compared to three (3) females, mirroring the trend seen at Takoradi Technical University. However, a noteworthy reversal of this trend is observed at Koforidua Technical University, where more females (7) than males (4) were awarded scholarships within the specified reference period. This unique pattern at Koforidua Technical University underscores a departure from the predominant trend observed in other institutions, emphasizing the importance

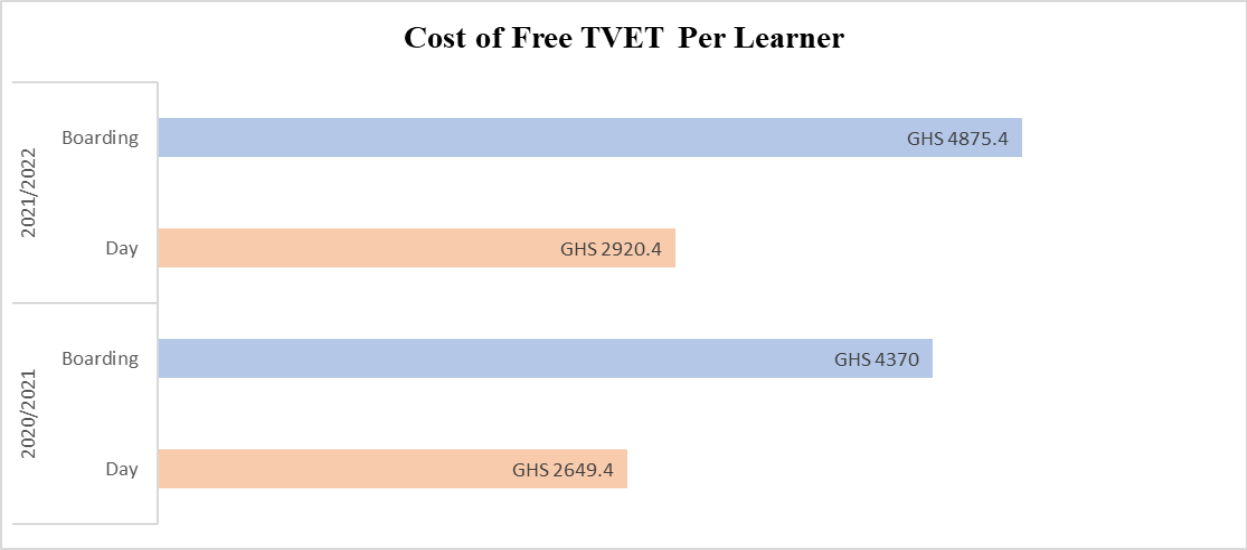
of considering and addressing gender dynamics in scholarship distribution across technical universities.

9.6 Cost of Free TVET Per Learner

The cost analysis of the free TVET policy per learner is presented in Figure 8.4. Notably, the fee structure does not differentiate based on the specific trade area of focus for learners. Instead, it aggregates the general cost incurred by the government to train each learner from the first semester of the first year to the second semester. The chart delineates the costs for both day learners and boarding learners, comparing the years 2020/21 and 2021/22.

Before the alignment of all TVET institutions under the TVET service, these institutions such as ICCES, NVTI, CDC, and GRATIS were overseen by different organizations, Following the alignment, the government emerged as the primary financier of the free TVET policy, with technical support from other stakeholders. The graph below shows how much the government spent on every learner in either the boarding or day learners. This insightful data underscores the financial commitment of the government in supporting education across these two categories of learners. The expenditure per learner is a critical metric that reflects the investment made to ensure a conducive and enriching learning experience for students.

Figure 9.6 Cost of Free TVET Per Learner



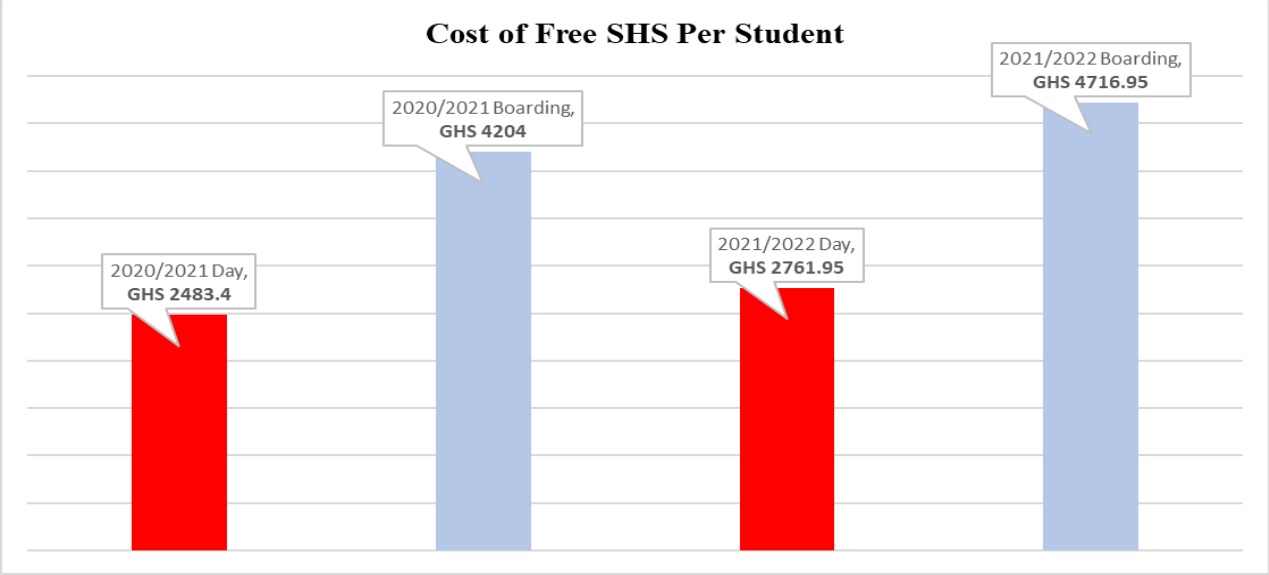
Source: Ministry of Education, 2023

Figure 9.6 illustrates that in the 2020/21 academic year, the cost of financing one non-residential learner under the free TVET policy was GHS 2,649.4, while it cost GHS 4,370 to train one residential learner. This cost experienced a modest increase of 10.23% in the 2021/22 academic year, reaching GHS 2,920.4 for non-residential learners. Similarly, the cost for residential learners increased from GHS 4,370 in the 2020/21 academic year to GHS 4,875.4 in the 2021/22 academic year, reflecting an almost 11.57% change from the previous year's cost. This analysis provides insights into the financial dynamics of the free TVET policy and the associated costs per learner.

9.7 Cost of Free SHS Per Student

Figure 9.7 provides a visual representation of the government's expenditure per learner, differentiating between non-residential and residential learners.

Figure 9.7 Shows the Cost Per Day and Boarding Student Under the Free SHS Policy



Source Ministry of Education, 2023

The cost analysis of the Free Senior High School (SHS) program per learner reveals an 11.84% increase from GHS 6687.4 in the 2020/21 academic year to GHS 7478.90 in the 2021/22 academic year for each learner. The breakdown of costs for both day and boarding learners provides a more detailed understanding. In the 2020/21 academic year, the government incurred a cost of GHS

2483.4 for each non-residential learner, while the education cost for each boarding learner amounted to GHS 4204. In the 2021/22 academic year, there was an increase in costs, with the government incurring GHS 2761.95 for each day learner and GHS 4716.95 for each boarding learner. These figures highlight the evolving financial dynamics of the Free SHS program, indicating both the overall increase in costs per learner and the specific changes for both day and boarding students between the two academic years.

9.8 The Ghana TVET Voucher Project (GTVP)

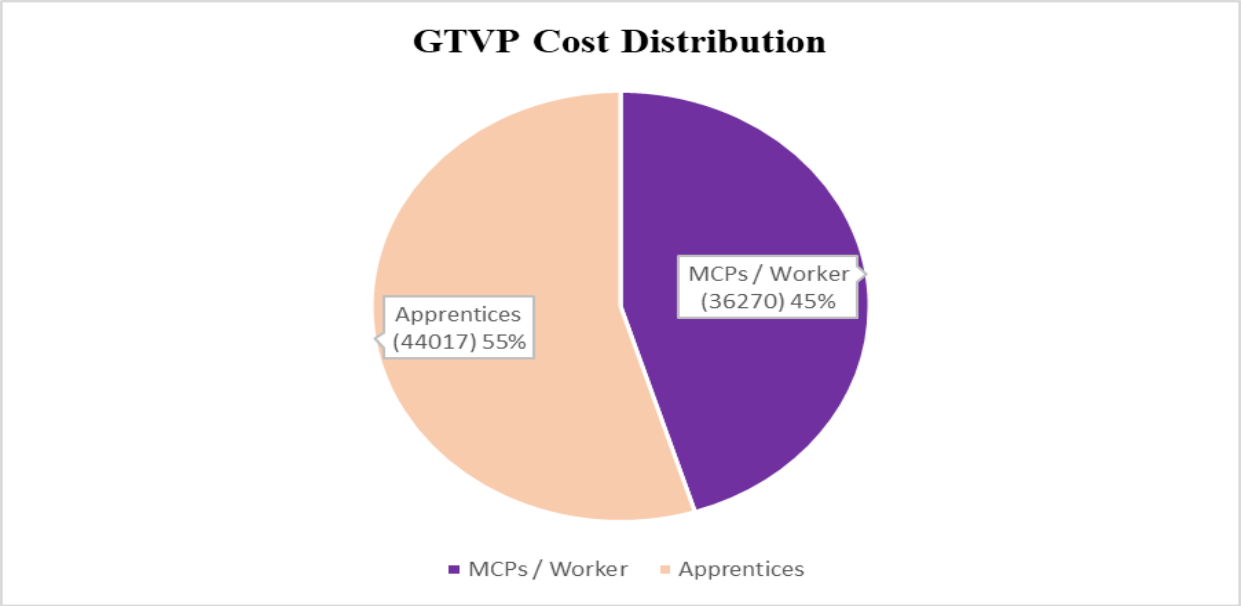
The Ghana TVET Voucher Project (GTVP) is a collaborative initiative between the Ghanaian and German governments, co-financed by the German Government through KfW, and implemented by CTVET. This project is strategically tailored to benefit small and medium enterprise owners within the informal sector, along with their employees and apprentices. Its primary goal is to enhance the accessibility of the target demographic to demand-driven TVET programs, ensuring rigorous adherence to quality standards and, consequently, facilitating improved access to gainful employment opportunities.

The industries involved in the GTVP span a diverse range, including construction, welding, auto repair, consumer electronics, garment making, cosmetology/hairdressing, plumbing, catering/hospitality, electrical installation, furniture making, block laying/tiling, and cosmetology/hairdressing.

9.8.1 GTVP Cost per training an apprentice and a master craft person

Figure 9.8 provides a visual representation of the comprehensive project expenditure, encompassing both apprentices and master craftsmen who have benefited from the initiative. This illustration offers a transparent view of the total costs incurred by the project, reflecting the financial investment directed towards the skill development and empowerment of both apprentices and experienced master craftsmen. The costs involve training both practical and theoretical aspects, providing training materials, facilitation, examination expenses, transportation for apprentices, monitoring, and other administrative expenditures.

Figure 9.8. Shows Cost distribution for training an apprentice and a master craft person



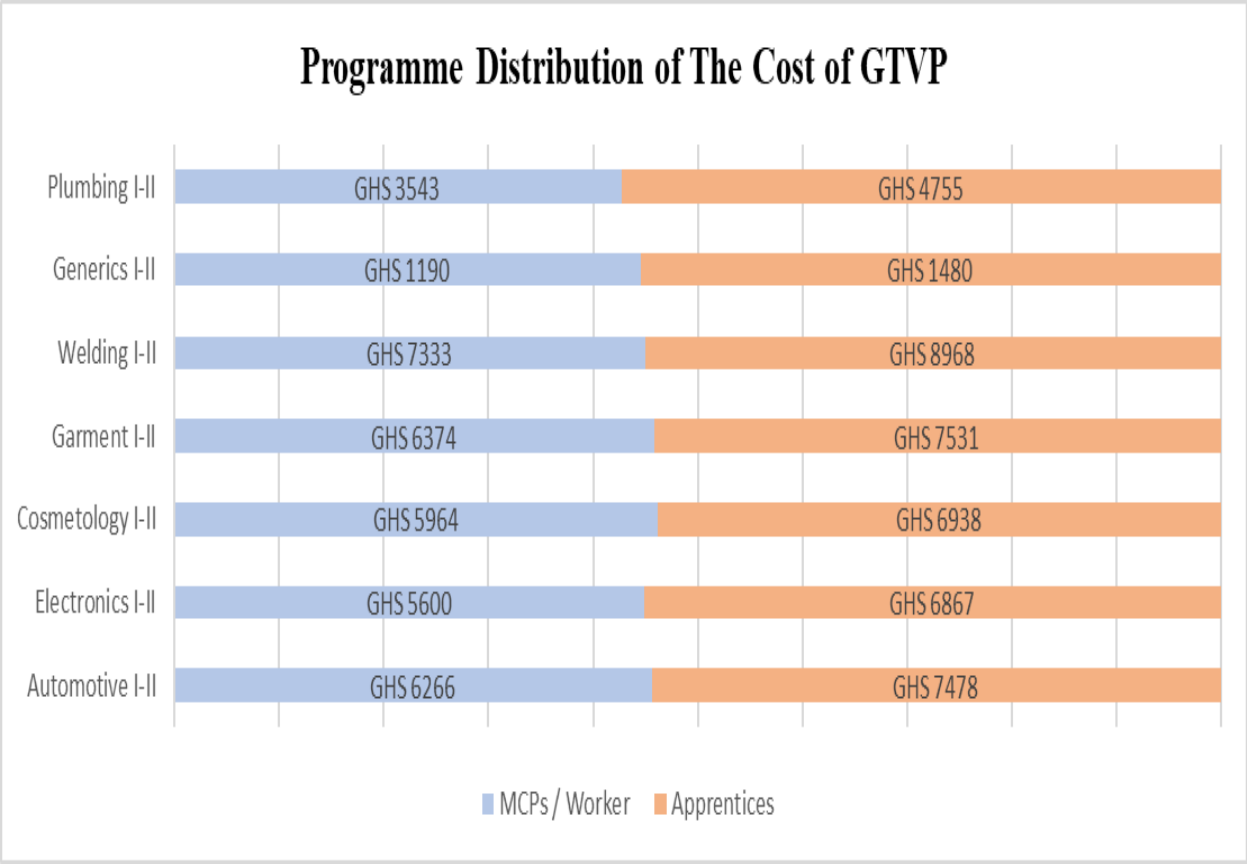
Source: GTVP, 2022

In terms of cost distribution for the six months of training for apprentices and MCPs, figure 9.8 indicates that GHS 44,017.00 representing 55% of the total amount was allocated to the training of each apprentice, while the remaining GHS 36,270.00 representing 45% was dedicated to the upskilling of each MCP. This allocation emphasizes the project's commitment to investing in the development of both apprentices and MCPs, contributing to a holistic and balanced approach in advancing skills within the target industries.

9.8.2 Cost of Training Master Craft Person and Apprentice Per Programme

Figure 9.9 illustrates the cost distribution of the GTVP across various courses and levels. This visual representation provides a comprehensive understanding of how the GTVP's financial resources are allocated based on the programs at different qualification levels.

Figure 9.9 Programme Distribution of the cost of GTVP



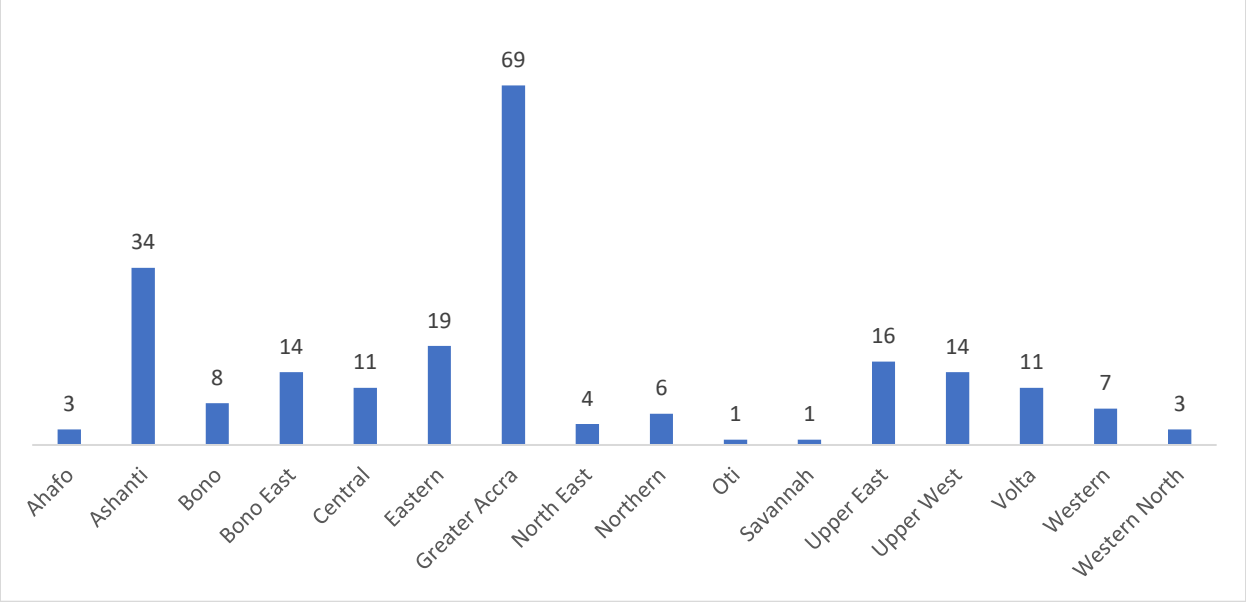
Source: GTVP, 2022

Among the programs covered by the GTVP, welding incurs the highest cost compared to other programs. Specifically, the cost to run the welding program under the voucher program is GHS 16,301.00, significantly surpassing the costs of other programs. For instance, general subjects (Basic English, mathematics, social studies, integrated science, etc.) entail a total cost of GHS 2,670.00, highlighting a substantial difference. The cost breakdown for other programs is as follows: plumbing GHS 8,298.00, garment GHS 13,905.00, cosmetology GHS 12,902.00, electronics GHS 12,467.00, and automotive GHS 13,744.00 respectively. This detailed cost distribution underscores the variation in financial requirements across different TVET programs under the Ghana TVET Voucher Project.

9.9 Ghana Skills Development Fund Grant Awardees (Call #1)

The Ghana Skills Development Fund represents a recent intervention aimed at enhancing skills development in Ghana, with a particular focus on the informal sector. It serves as a crucial initiative designed to enhance the skills of individuals and associations while promoting technological advancement. The graph below provides a clear visual depiction of the regional distribution of beneficiaries who have received grants from this significant fund.

Figure 9.10 Regional Distribution of Grants Awarded in call #1

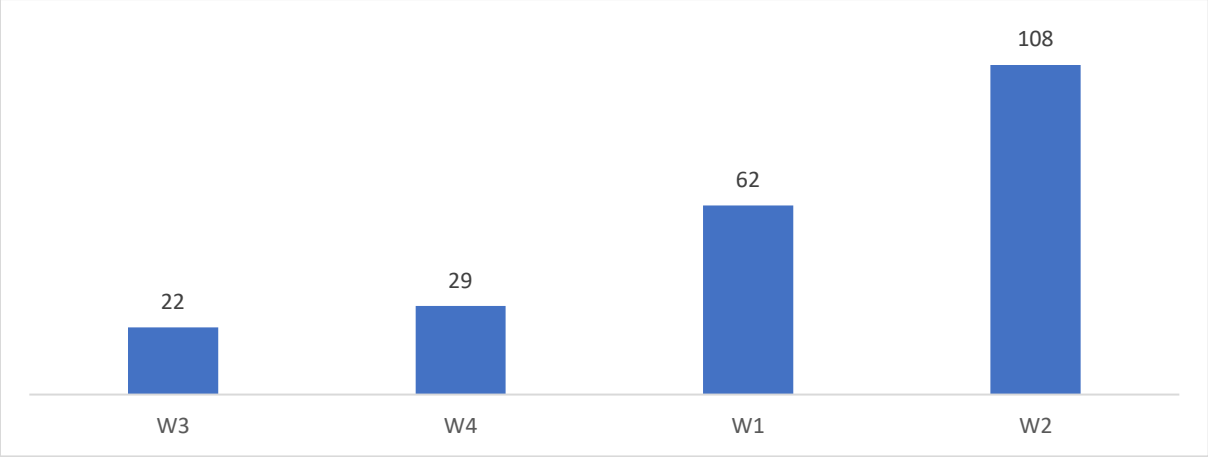


Source; GSDF Secretariat, 2023

Based on the data provided, Greater Accra emerges as the region with the highest number of grantees, totalling thirty-six (69). Other regions with significant representation include Ashanti, with thirteen (34) grantees, and Upper East, with twelve (16) grantees. However, the Savannah and Oti regions had only one grantee each. This regional breakdown highlights the diverse levels of participation in the competitive grant project across different regions, indicating the importance of targeted efforts to ensure fair distribution and accessibility of opportunities nationwide.

9.9.1 Grants Awarded Per Window

The exploration of the project's cost was examined by analysing the distribution across the various windows under the GSDF, as illustrated in the chart below.



Source; GSDF Secretariat, 2023

The majority of grantees were in Window 2 (108), followed by Window 1, where 62 grantees were awarded. In comparison, Window 3 had only 22 grantees, making it the least among the windows. This distribution emphasizes the significant allocation to Window 2 and provides valuable insights into the strategic allocation of funds across different project components within the framework of the GSDF grant. Understanding these proportions aids in evaluating the project's priorities and resource distribution among the various windows.

CHAPTER TEN

INTERNATIONAL COOPERATION

10.0 Introduction

This chapter delves into Ghana's collaboration with development partners in the TVET sector, focusing on initiatives to adapt to evolving technological landscapes. It highlights engagements with international partners such as the World Bank, Germany (including KfW, BIBB, GOVET, and GIZ), UNESCO, Canada (WUSC), the European Union (EU), the International Labour Organization (ILO), the African Union Development Agency-New Partnership for African Development (AUDA-NEPAD), the Netherlands, China (AVIC project), and the United Arab Emirates (PlanetOne). Additionally, Ghana's membership in the WorldSkills movement is discussed.

Table 9.1 outlines some areas of cooperation in the TVET landscape.

Table: 9.1: Development Partner Involvement in The TVET Sector (As At December, 2023)

No	Development Partner	Project Name	Background and Objectives	Budget	Status	Collaborating Partners / Institutions
1.	**World Bank** (International Development Association (IDA))	Ghana Jobs and Skills Project	The project comprises of five (5) components which support the Government's prioritized skills development and job creation agenda. However, two of these components relate directly to TVET. These are: 1. **Component 1** – Provision of apprenticeship training for jobs. Supports the apprenticeship training for jobs through: Provision of Apprenticeship Training which combines workplace-based training offered by a master craft person and classroom-based training offered by a public or private accredited training institute (provider), under a formalized, standardized, and quality-assured apprenticeship system.	$120 Million	• Ghana Jobs and Skills Apprenticeship Programme commenced in 2023.	• Ministry of Education • Commission for Technical and Vocational Education and Training (CTVET) • Ministry of Finance • MESTI • GEA • MELR
			2. **Component 2** – (*Sub-component 2.2)*: Provision of competitive grants to private enterprises for expanded employment. Provision of Competitive Grants to selected micro and small enterprises or groups of such enterprises to support workforce training and technological inputs to enhance		• 221 grants awarded.	

			worker productivity and workforce expansion.			
2.	**Kreditanstalt für Wiederaufbau (KFW)**	Ghana TVET Voucher Project (GTVP)	GTVP is a project under the Ghanaian-German Financial Development Cooperation, co-financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) through KfW Development Bank and the Government of Ghana. GTVP provides demand-driven training vouchers to CTVET-registered master craft persons, their apprentices and workers. The vouchers are used to fund competency-based training (CBT) courses in CTVET-accredited training institutions for certification in National Proficiency Levels I and II. The overall objective of the project is to improve access of the target group to demand-oriented TVET, which meets quality criteria with the aim of improving access to decent employment. It is also to strengthen TVET stakeholders and establishing a consistent incentive system for training providers.	€22.08 million	Phase II trained over 19,000 beneficiaries.	• CTVET • Ministry of Education • Ministry of Finance • GIZ
3.	**GERMAN AGENCY FOR INTERNATIONAL COOPERATION (GIZ) / DEUTSCHE GESELLSCHAFT FÜR**	Ghana Skills Development Initiative (GSDI IV)	GSDI IV primarily aimed to expand and anchor cooperative and competence-based training in the Ghanaian TVET system. This is through a stronger focus on capacity development for the Commission for TVET in the areas of TVET	N/A	• Project ended in December, 2022 • New TVET Project to replace it called EU-Ghana Pact	• CTVET • Ministry of Finance • Ministry of Education • AAMUSTED • TVET Service

	INTERNATIONALE ZUSAMMENARBEIT		coordination, registration and accreditation, curriculum development, quality assurance and Monitoring & Evaluation. The Project also aimed at producing high-quality, standardized TVET to improve professional skills that meet the needs of the labour market. This is expected to promote the greater employability of young people in Ghana. The project supports the Commission for TVET's innovative approach to introducing competency-based training (CBT) standards.		for Skills: Support for the Transformation of the TVET System (STTSG)" project	• Switzerland State Secretariat for Economic Affairs (SECO)
4.	**BIBB & GOVET**	Ghana-Germany Collaboration on Skills development	Capacity building towards the development of the Ghana TVET report as well as in organizational development. Organized study tour for Ghana Government Delegation in 2022.	N/A	• New Joint Declaration of Intent Signed in 2024 to keep collaborating.	• CTVET • Ministry of Education
5.	**AUDA-NEPAD**	Skills Initiative for Africa (SIFA)	SIFA is an initiative of the African Union Commission (AUC) supported by the German Government to strengthen occupational prospects of young people in Africa. SIFA finances skills development projects in several African countries. Projects should contribute to employment-oriented skills development for young people.	EUR 9.4	• Grant amount for Window one, Window two, and Window three.	• CTVET • Ministry of Education • KFW • DTI • CSIR-IIR • KNUST • HTU • Social Enterprise Ghana

6.	**WORLD UNIVERSITY SERVICE OF CANADA (WUSC)**	The Innovation in Non-Traditional Vocational Education and Skills Training (INVEST) PROJECT	The INVEST initiative seeks to address the root causes of gender inequalities faced by young women, and engage with industry actors to create an enabling environment for young women's access to decent work, ultimately leading to a strengthened workforce and labour market. The project aims to support a total of 5,000 women by end of the project	CAD$8.5 million	Project currently entering final phase (year 4) towards completion.	• CTVET • TVET Service • NEIP • Global Affairs Canada / Canadian Embassy
7.	**ALINEA FOUNDATION**	Women Economic Empowerment in Northern Ghana (WEE-North)	The project seeks to train 2,000 young women from age 18-35 in selected male-dominated, industrial trades in Northern Ghana.	N/A	850 young women from all 55 districts in the five regions of Northern Ghana as at December, 2022	• CTVET • TVET Service • Global Affairs Canada / Canadian Embassy
8	**NETHERLANDS EMBASSY**	Orange Knowledge Project (OKP)	• Supported the Institutional strengthening of national bodies for TVET in Ghana in terms of accreditation, supervision, and management. • Supported with the development of the ATVET curriculum and enforcement policy.		The project ended in December 2022	• CTVET • AAMUSTED, Mampong Campus • NUFFIC • CINOP

10.1 WorldSkills

Ghana's membership in WorldSkills International marks a significant milestone as the 81st member and the first West African country to join this global organization. WorldSkills International comprises individuals and organizations dedicated to advancing the common social objective of enhancing skills provision. Established in 2019, WorldSkills Ghana (WSGh) operates as a secretariat within the Commission for Technical and Vocational Education and Training. Its primary responsibilities include organizing skills competitions at both the Zonal and National Levels, as well as adequately preparing competitors for participation in WorldSkills Regional and International competitions. Through its affiliation with WorldSkills International, Ghana gains access to a wide array of training opportunities, providing valuable exposure and fostering skills development on both regional and global scales.

10.1.1 Partnership with Germany

Ghana has forged a partnership with WorldSkills Germany (WSG) to leverage their extensive expertise in skills development. As a longstanding member of WorldSkills International since 1953, WSG offers a wealth of experience in organizing both national and international skills competitions, as well as in developing organizational structures and fostering partnerships within the WorldSkills movement. This collaboration allows WorldSkills Ghana to benefit from WSG's knowledge and insights, enhancing its capacity to organize competitions effectively and strengthen its position within the global skills community.

This partnership was made official in 2021, when an MOU was signed between the two. The partnership seeks to:

a. Organize, plan, project management and implementation of the national competitions and preparation of experts and participants for international competitions.

b. Establish and expand the organizational structures of the WSGh Secretariat.

c. Develop team skills: experts, technical supporters, skills sponsors.

d. Train experts, develop training and performance centres.

e. Train Competitors: regarding their skills (soft and hard) and attitudes needed for competition.

This partnership has resulted in a lot of mutual benefits between the two countries. In preparation towards the WorldSkills Africa competition, Ghana's welding competitor, was sponsored by WorldSkills Germany for a two-week intensive training ahead of the WorldSkills Africa competition in Swakopmund, Namibia 2022. The support was part of WorldSkills Germany's commitment to support Ghana in skills development.

10.1.2 Partnership with China

WorldSkills China collaborated with WorldSkills Ghana ahead of the WorldSkills International Special Edition competition held in October 2022, providing essential support and guidance to ensure the success of the skills competition. This partnership aimed to strengthen the existing relationship between the two organizations and lay the groundwork for future exchange programs and collaborative initiatives.

Similarly, in 2023, WorldSkills China extended an invitation to the Chief Expert for IT Software Solutions for Business to participate in a Capacity Building workshop held in Taipei in July 2023. This initiative underscores the ongoing collaboration between Ghana and China, with WorldSkills China sponsoring and facilitating Ghana's participation in the workshop.

Additionally, as part of Ghana's partnership with China, the country participated in the Africa Tech Challenge organized by AVIC International Holding Corporation in 2022 and 2023 in Kenya. These engagements highlight the multifaceted cooperation between Ghana and China in the realm of skills development and technology exchange.

10.1.3 WorldSkills Africa, (Swakopmund, Namibia Competition)

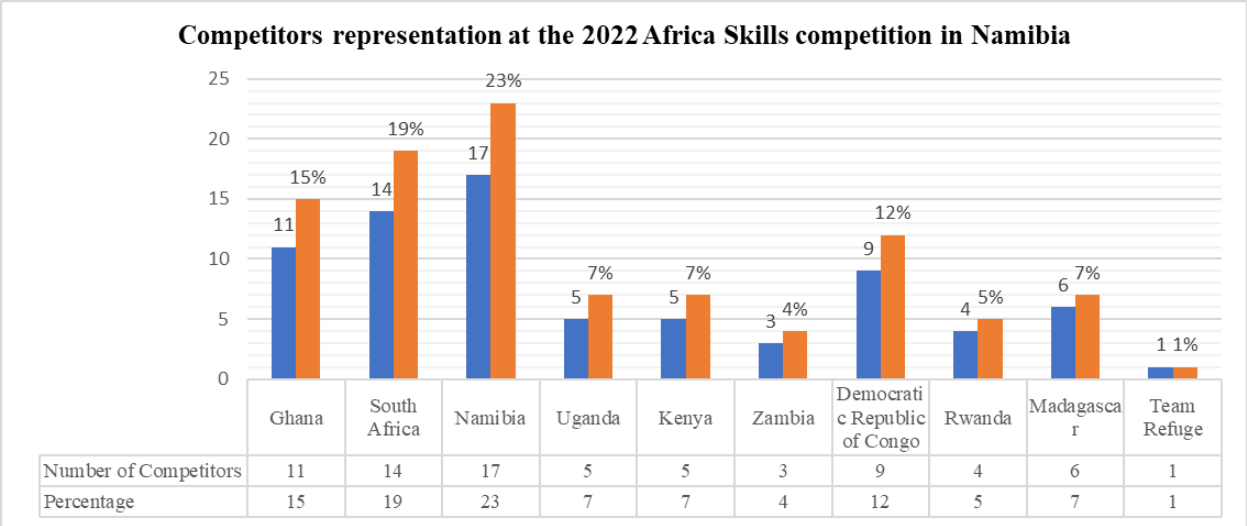
WorldSkills Africa is a regional competition organized every two years by WorldSkills International. The last African Skills competition was organized from the 28th of March to the 2nd of April 2022. About seventy (70) competitors from over nine (9) African countries, together with a Refugees team, gathered in Namibia to showcase their talent in sixteen (16) skill areas, namely: Mechatronics, Bricklaying, Mechanical Engineering CAD, Web Technologies, Hairdressing, Welding, Electrical Installation, Fashion Technology, Cooking, and Automobile Technology, Joinery, Plumbing and Heating, Restaurant Services, Wall and Floor Tiling, Refrigeration and Air Conditioning, Water Technology, and Digital Challenge.

Out of these, Ghana competed in ten (10) skill areas, which include: Mechatronics, Bricklaying, Mechanical Engineering CAD, Web Technologies, Hairdressing, Welding, Electrical Installation, Fashion Technology, Cooking, and Automobile Technology.

Table 10.3: Key Activities

Competition	**Year**	**Award and Skill area**
WorldSkills Africa Regional Competition	2022	• Gold in Mechanical Engineering CAD • Gold in Web Technology • Silver in Fashion Technology • Silver in Electrical Installation.
WorldSkills Annual Conference	2023	• Four (4) member delegation from WorldSkills Ghana participated in Dublin, Ireland
Training		
Nature of Programme	**Year**	**Country**
Training of Welding competitor.	2022	Between WorldSkills Ghana and WorldSkills Germany
Exchange Programme (Ghana and China).	2023	Capacity Building workshop Organized by WorldSkills China. China focused on knowledge sharing.

Figure 10.1: Number of competitors and their country representation



Source: CTVET, WorldSkills Ghana Secretariat, 2023

The host country, Namibia had 17 competitors making up 23 % age distributing representing and competing together with the eight (8) other African countries. This was followed by South Africa (19 %) and Ghana (15 %) respectively. All participating countries had National Experts assigned for various responsibilities such Jury, Competition Committee representatives among others. Ghana's representation was overwhelming which included 10 national experts assigned these roles. During the call out at the Closing ceremony, Ghana won 4 medals, which included two (2) gold and two (2) silver.

10.3 International Labour Organization (ILO)

The Commission collaborates with ILO in skills training and curriculum development. They supported the Commission to establish SSBs and provided training in Skills for Trade and Economic Diversification (STED) sessions for the Healthcare, Pharmaceuticals, Transport & Logistics, Apparel, Garments & Textiles and Automotive sectors. Other areas of support include:

i. Capacity building on measuring skills mismatches for five (5) members of the National Task Team (NTT) to improve Ghana's labour market information system.

ii. Capacity building on ILO's STED method to four (4) members of the National Task Team (NTT) on improving and strengthening LMIS from 4-8 April 2022 in Zanzibar with the participation of National Project Coordinator of Ghana component of GPSL3.

iii. Built capacity for leadership of the 12 operational SSBs and senior staff members from CTVET in the areas of labour market information and skills anticipation.

iv. Developed five (5) skills strategies with corresponding action plans for Healthcare, Pharmaceuticals, Transport & Logistics, Apparel, Garments & Textiles and Automotive sectors.

v. Developed a National Action Plan for strengthening and improving Labour Market Information Systems in Ghana.

vi. Developed career pathways for the tourism and hospitality sector.

CHAPTER ELEVEN

FUTURE OF TVET IN GHANA

11.0 Introduction

The future of Technical and Vocational Education and Training (TVET) hinges on the establishment of robust industry partnerships. Additionally, the trajectory of TVET is influenced by disruptions within the system, primarily driven by technological advancements.

Moreover, the evolving landscape of technology is poised to significantly alter the skills requirements across various sectors in the coming years. Below is a breakdown of the anticipated skills needs by sector over the next five years.

11.1 Automotive Industry

Firms in the automotive sector reported manufacturing process knowledge as the top priority over the next 5 years, with most firms keen to optimise efficiency to aid their business output and growth. Other skills are also clearly linked to driving higher quality standards of output and optimisation, such as the need for programme logic control and quality core tools training. Leadership development is also a major requirement across a multitude of multi-disciplinary supervisory and managerial roles to manage current and expanding workforces. Approximately two-thirds of employers identified that many skills are required due to technological advancements in areas such as engineering, mechatronics, robotics, programmable logic control.

Table 11.1 Skills requirement in the automotive sector

Rank	**Critical Now** Impacting business output/skill need to be addressed in the next 1-2 years	Rank	Future Ongoing Start to impact business in the next 1-2 years/ foreseeable ongoing need 2-5+ years
1	**Manufacturing Process Knowledge**	1	**Manufacturing Process Knowledge**
2	**Quality Core Tools Training**	2	**Mechatronics**
3	**Basic Engineering**	3	**Programme Logic Control**
4	Computer Aided Engineering	4	**Robotics**

5	**Programmable Logic Control (PLC)**	5	**Welding**
6	**Robotics**	6	Computer Aided Engineering
7	**Advanced Problem Solving**	7	**Quality Core Tools Training**

Source: Future Skills Requirement in the Various Sector Report (CTVET), 2024

11.2 Media and Entertainment Sector

The future skills requirements for the media and entertainment sector have been categorised into the top 10. Virtually, the same needs for both the current and the future except that there is slight difference in priority order, the exception being three of the current short-term skill requirements (creative writing and performance, live streaming and blogging/vlogging) are replaced by gaming, copywriting and digital media production skills.

Table 11.2 Skills requirement in the entertainment sector

Rank	Critical Now Impacting business output/skill need to be addressed in the next 1-2 years	Rank	Future Ongoing Start to impact business in the next 1-2 years/ foreseeable ongoing need 2-5+ years
1	Creative writing and performance (story or script writing, musical composition and performance, theatrical performance)	1	Content creation, marketing and distribution
2	Content creation, marketing and distribution	2	Digital printing
3	Visual effects in post-production film, TV and animation	3	Broadcast technology and engineering
4	Digital imaging	4	Protection of intellectual property
5	Broadcast technology and engineering	5	Gaming
6	Live streaming	6	Visual effects in post-production film, TV and animation
7	Blogging/Vlogging	7	Digital media production, including videos, podcasts and GIFs
8	Digital printing	8	Graphic design and visual communication

9	Graphic design and visual communication	9	3-D design
10	3-D design	10	Digital imaging

Source: Future Skills Requirement in the Various Sector Report (CTVET), 2024

11.3 Beauty and Wellness

There are different types of areas in which employees require new skill sets within the sector. These skill requirements have been categorised into the top 7. The table depicts virtually the same needs for both the current and the future, with a large difference in priority order and the exception being six of the current short-term skill requirements (skin care treatment, facial treatment, aromatherapy, tech-infused cosmetic solutions, beauty sales and brand engagement using technology and innovation with new products and treatments) are replaced by wellness and complementary therapies, holistic massage, complementary treatments, nutrition and wellness, hair removal methods, and advanced beauty treatments).

Table 11.3 Skills requirement in the beauty and wellness sector

Rank	**Critical Now** Impacting business output/skill need to be addressed in the next 1-2 years	Rank	Future Ongoing Start to impact business in the next 1-2 years/ foreseeable ongoing need 2-5+ years
1	Skin care treatment	1	Wellness & complementary therapies
2	Facial treatments	2	Holistic massage
3	Extraction and formulation techniques	3	Complementary treatments
4	Aromatherapy	4	Nutrition & wellness
5	Changning core hair services	5	Extraction and formulation techniques
6	Beauty sales and brand engagement using technology	6	Hair removal treatments
7	Innovation with new products and treatments	7	Advanced beauty treatments

Source: Future Skills Requirement in the Various Sector Report (CTVET), 2024

11.4 Banking and Finance

The skill requirements have been categorised into the top 6. The table depicts virtually the same needs for both the current and the future but with a slight difference in priority order and the

exception being two of the current short-term skill requirements (development of innovative products and digitization of loan and recovery processes) are replaced by data structures and algorithms and cybersecurity skills.

Table 11.4 Skills requirement in the banking and finance sector

Rank	Critical Now Impacting business output/skill need to be addressed in the next 1-2 years	Rank	Future Ongoing Start to impact business in the next 1-2 years/ foreseeable ongoing need 2-5+ years
1	Development and application of technology	1	Data Structures and Algorithms
2	Development of innovative products and services	2	Cybersecurity
3	Digitization of loan and recovery processes	3	Financial and statistical analysis and modelling
4	Fraud detection and prevention	4	IT & Programming
5	Financial and statistical analysis and modelling	5	Fraud Detection and Prevention
6	IT & Programming	6	Development and application of technology

Source: Future Skills Requirement in the Various Sector Report (CTVET), 2024

11.5 Machine and Manufacturing sector

Different types of learning and development are required for employees within the sector. These skill requirements have been categorised into the top 6. The table depicts virtually the same needs for both the current and the future but with a slight difference in priority order, the exception being two of the current short-term skill requirements (industrial design/systems design and production of new and innovative products) are replaced by industrial robotics process automation and additive manufacturing.

Table 11.5 Skills requirement in the machine and manufacturing sector

Rank	Critical Now Impacting business output/skill need to be addressed in the next 1-2 years	Rank	Future Ongoing Start to impact business in the next 1-2 years/ foreseeable ongoing need 2-5+ years
1	Advanced welding/Industrial welding	1	Program manufacturing of specific machines and devices
2	Industrial design/systems design	2	Advanced welding/Industrial welding
3	Program manufacturing of specific machines and devices	3	Industrial robotics process automation
4	Implementing new technologies in machine/equipment manufacturing	4	Additive manufacturing
5	Production of new and innovative products	5	Implementing new technologies in machine/equipment manufacturing
6	Production (forging) and machining	6	Machine/equipment design

Source: Future Skills Requirement in the Various Sector Report (CTVET), 2024

11.6 Security and Safety Sector

As the security and safety sector continues to evolve, future skills requirements are also transforming to meet the demands of a rapidly changing landscape.

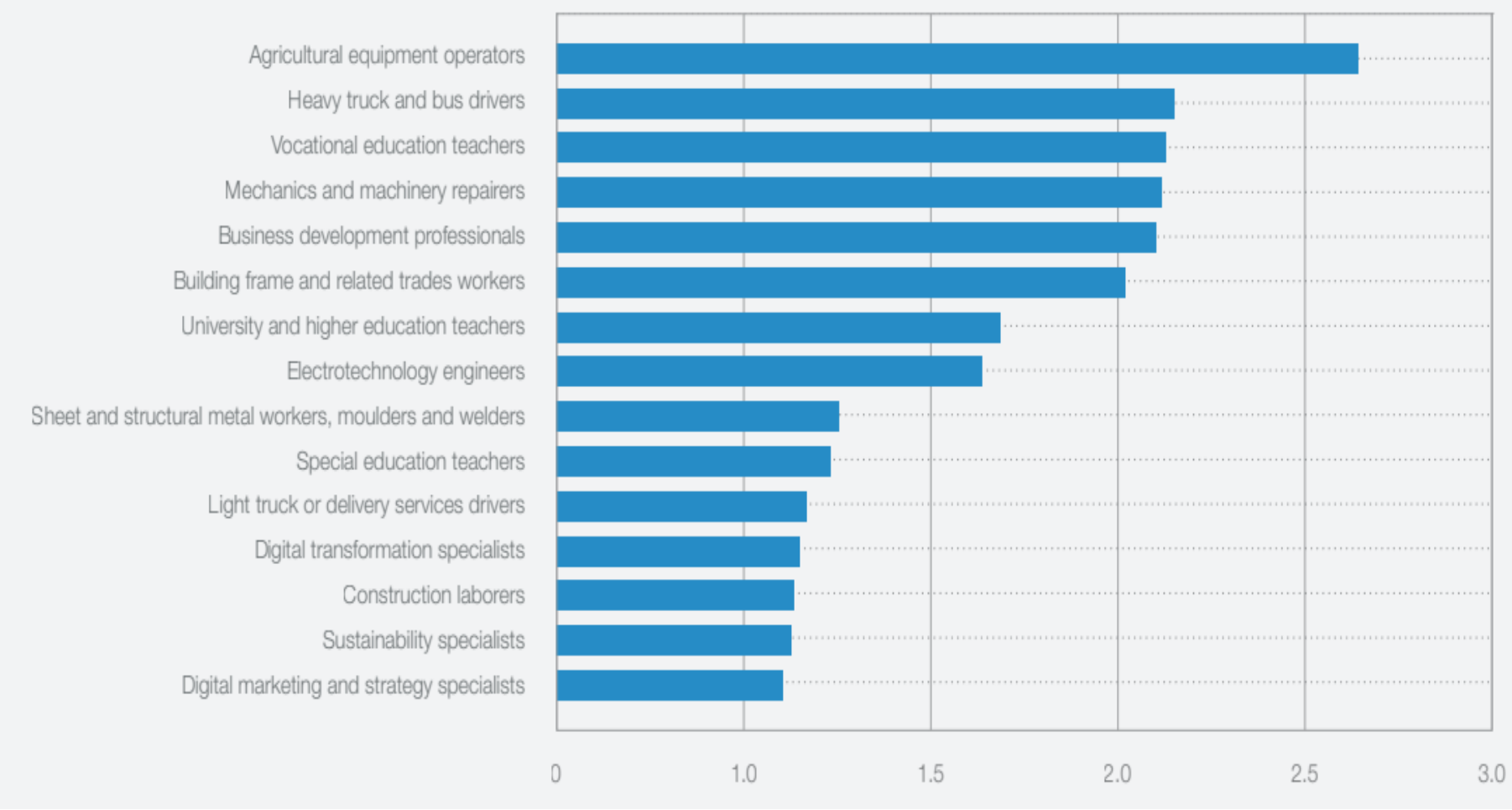
Table 11.6 Skills requirement in the security and safety sector

Rank	Critical Now Impacting business output/skill need to be addressed in the next 1-2 years	Rank	Future Ongoing Start to impact business in the next 1-2 years/ foreseeable ongoing need 2-5+ years
1	DevSecOps including application security	1	Use of firearms
2	Threat intelligence and analysis	2	Security surveillance management
3	Firewall monitoring and content Filtering	3	Vulnerability scanning and management
4	Penetration Testing	4	Cyber-security diagnostics assessment
5	Vulnerability scanning and management	5	Detection security threats
6	Cyber-security diagnostics assessment	6	Computer hacking forensic investigation

Source: Future Skills Requirement in the Various Sector Report (CTVET), 2024

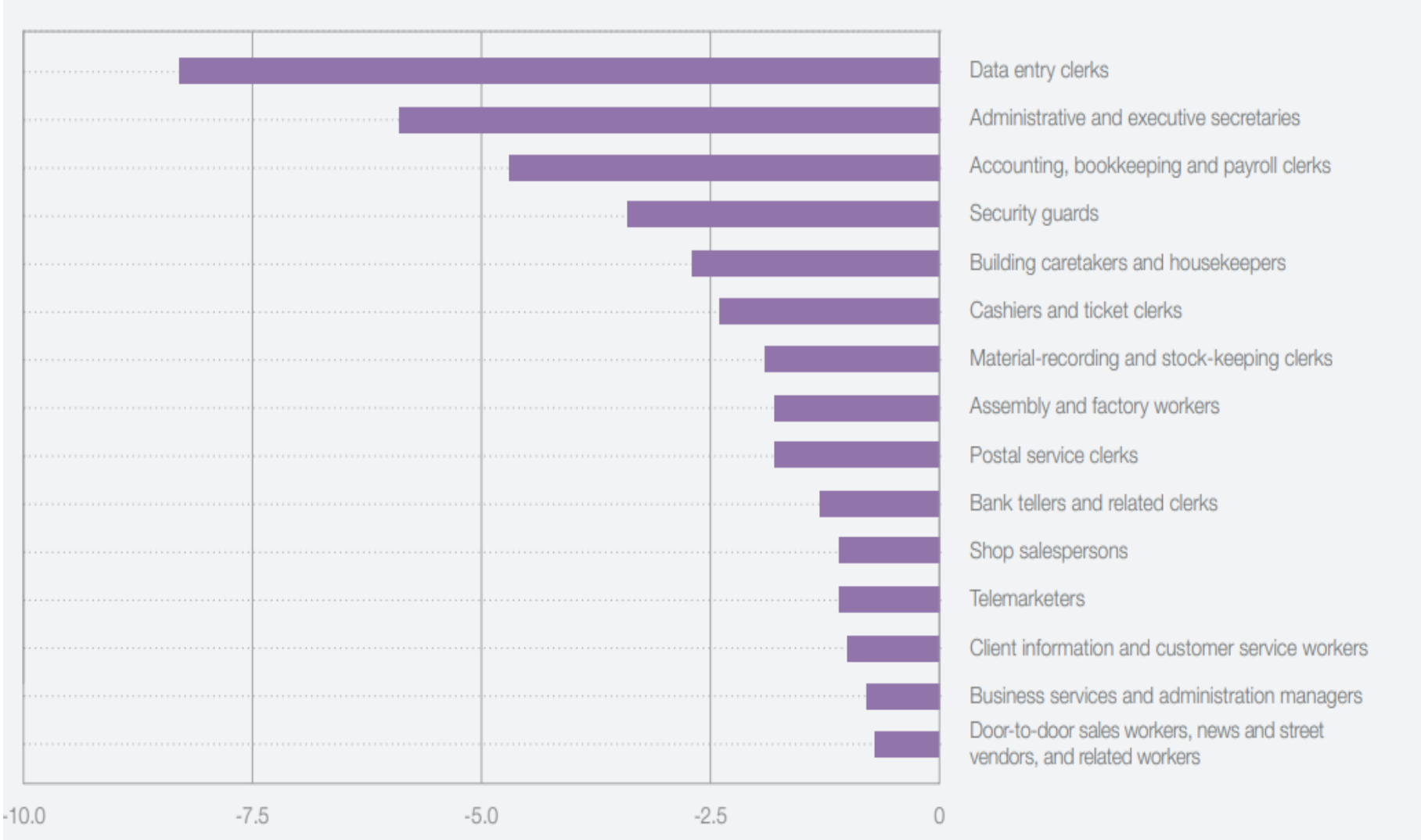
The world Economic Forum below are the jobs where there would be a growth in demand in the millions over the next five years.

Figure 11.1: Top roles by order of job growth



Source: World Economic Forum, Future of Jobs 2023.

Figure 11.2: Top roles by order of decline in next 5 years



Source: World Economic Forum, Future of Jobs 2023.

It is quite clear from the above that, most of the jobs that will be in demand over the next 5 years are TVET related jobs, such as agriculture, mechanical engineering, digital skills and electrotechnology engineers among others. Indeed, the survey results suggest that the highest growth from 2023–2027 will be for Agricultural Equipment Operators, Heavy Truck and Bus Drivers, and Vocational Education Teachers. Data Entry Clerks; Administrative and Executive Secretaries; and Accounting, Bookkeeping, and Payroll Clerks are expected to suffer the greatest reduction in employment (World Economic Forum, 2023).

11.8 Forward Looking Strategies by the Government of Ghana

11.8.1 TVET Policy

The Government of Ghana as part of its forward-looking strategies will be developing a TVET policy which will serve as the overarching policy document from which all TVET strategies and initiatives will be guided. The last TVET policy which existed in the TVET space was developed in 2004. Considering the changes that has happened in the TVET sector which was occasioned by the re-alignment of all TVET institutions in Ghana, it is imperative that a TVET policy be developed which factors in the current structure or outlook of the TVET landscape.

One of the goals of the TVET policy will be to define the scope of TVET in Ghana and establish the parameters within the agencies within the TVET space are to operate. The policy will also seek to consolidate overall government vision for the TVET space among others

11.8.2 Development of the next five-year strategic plan

The last strategic plan for TVET transformation (2018-2022) ended in December, 2022. As such, there is the need to also develop another five-year strategic plan which will clearly indicate the policy objectives of the actors within the TVET space, as well as set specific goals and targets to be achieved within the TVET space.

The strategic plan will seek to consolidate government efforts in the area of TVET governance and management; access, equity and inclusion; ICT and digitalization; quality assurance; sustainable

TVET financing; environmental sustainability and health in TVET; and branding promotion and improving perceptions about TVET.

11.8.3 Digitalization of the TVET system in Ghana

According to UNESCO-UNEVOC, digital transformation will lead to massive changes in the skill sets needed for work and life. Successful use of digital technologies is also a key factor in meeting the Sustainable Development Goals. Teaching and learning need to address the changes and challenges brought about by the introduction of Information and Communication Technologies (ICT) in almost all areas. TVET institutions have to make best use of new technologies to provide adequate education.

Thus, it is the goal of the government to digitalize the TVET system in Ghana. These efforts at digitalization are being supported by the European Union and the German Government through the EU-Ghana Pact for Skills: Support for the Transformation of the TVET System (STTSG)" project.

11.8.4 Licensing and professionalization of TVET graduates

One of the ways to increase the income earning potential of TVET graduates is through licensing and professionalization of the TVET graduates. This activity has the added objective of ensuring that there are adequate quality assurance measures in place before TVET graduates enter the world of work. The Government is working with key stakeholders to make this vison a reality as evidenced in the recent establishment of the Ghana Welding Bureau which was spearheaded by the Petroleum Commission with support from CTVET and other agencies. The overall goal is the establish professional and licensing bodies for each of the identified TVET trades in Ghana.

11.8.5 Sustainable TVET Financing

With the establishment of the Ghana Skills Development Fund Committee in 2022 as one of the key requirements in the ACT 1023 (Education Regulatory Bodies Act, 2020) which established CTVET, the country has taken the first step towards ensuring that there is sustainable funding for TVET.

This initiative has been followed up by the establishment of the Ghana Skills Development Fund, with a $60 million seed funding through the Ghana Jobs and Skills Project. The GSDF is embedded in the Government's TVET policy which has as its objective to "Create jobs and competitiveness of the skilled workforce and raise the income-earning capacities of people, especially women and low-income groups, through the provision of quality-oriented, industry-focused, and competency-based training programmes and complementary services".

The Government of Ghana is applying a portion of a loan of USD 200 million from the International Development Association of the World Bank, towards the implementation of the Ghana Skills Development Fund (GSDF) as one of the key components of the Ghana Jobs and Skills Project (GJSP).

11.8.6 Institutionalizing Tracer studies

To facilitate informed policy-making and decision-making processes, CTVET is collaborating with all Technical Universities to institutionalize tracer studies. This initiative aims to establish a systematic method for collecting data on TVET graduates, thereby providing readily available information on their outcomes and the impact they have on various industries.

11.8.7 Implementation of Dual TVET

The Ministry of Education, in collaboration with CTVET and the Ghana TVET Service, is actively pursuing the implementation of the Dual Technical and Vocational Education and Training (DTVET) system as a complementary pathway for skills training and development in Ghana.

The DTVET system involves comprehensive training for learners in two distinct environments: an accredited Technical and Vocational Institute (TVI) and a training company. Within the TVI, learners acquire theoretical knowledge and fundamental skills, while in the training company, they develop practical skills in a real-world setting. Both settings aim to cultivate attitudinal capacities for effective collaboration and integration of theoretical and practical learning experiences. The duration of in-company training will align with the curricular guidelines established by the National TVET Qualifications Framework (NTVETQF).

The Commission for TVET is tasked with coordinating and overseeing the implementation of the Dual TVET system across Ghana.

11.8.8 Strengthen the implementation of the Recognition of Prior Learning (RPL).

The Commission is actively fulfilling one of its primary responsibilities outlined in Act 1023, which involves implementing the Recognition of Prior Learning (RPL) within the National Technical and Vocational Education and Training Qualifications Framework (NTVETQF). This initiative aims to address the growing number of individuals who have acquired significant skills and knowledge, both formally and informally, within and outside the TVET sector, yet lack formal qualifications.

RPL has been prioritized on the national agenda and is being integrated into the Competency-Based Training (CBT) framework overseen by the Commission for TVET. RPL entails a systematic process of assessing prior skills and knowledge acquired through formal, informal, or non-formal learning against predetermined qualification standards in order to formally recognize them.

11.8.9 Bridging Innovation and Learning in TVET

As part of forward-looking strategies, the Government will provide support to TVET institutions to tackle challenges associated with technological, environmental, and social transformations. In partnership with UNESCO-UNEVOC, efforts will focus on identifying innovative initiatives that address systemic challenges across five thematic areas: new qualifications and competencies, greening, digitalization, entrepreneurship, and migration. The objective is to gain insights into the success factors of these initiatives and determine their transferability to other contexts.

UNESCO-UNEVOC has recognized certain initiatives as BILT (Bridging Innovation and Learning in TVET) Innovation and Learning Practices, which aim to enhance the relevance of TVET to the needs of economies, societies, and the environment. These practices serve as models for effective innovation and learning within the TVET sector.

APPENDICES:

Appendix I: List of TVET Institutions (*https://ctvet.gov.gh/accredited-programmes-2/*)

Appendix II: CBT Programmes Available from 2022 – January 2023 (*https://ctvet.gov.gh/accredited-programmes-2/*)

	COMMISSION FOR TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (CTVET)	
	CBT PROGRAMME FOR PUBLISHING 2022	
NO.	**TRADES**	**NTVETQ LEVEL**
1.	Wood Construction Technology	NP I – HND
2.	Textiles Design Technology	NP I - HND
3.	Furniture Design Technology	NP I - HND
4.	Garment Making and Fashion Design Technology	NC I - HND
5.	Mechatronics	NC I - HND
6.	Hospitality and Catering Management	NP I - HND
7.	Automotive Engineering Technology	NC I - HND
8.	Electrical Engineering Technology	NC I - HND
9.	Electronic Engineering Technology	NC I - HND
10.	Agriculture Mechanisation	NP I - HND
11.	Poultry Production	NC II
12.	Agripreneurship	NC II
13.	Solar Photo Voltaic	NC I
14.	CAD-CAM	NC II

15.	Tree Crop Production	NC II
16.	Livestock	NC II
17.	Artefact Design- Jewellery	NP I - NCII
18.	Artefact Design-Beading	NP I NC I
19.	Multimedia Practice	NP I - NCII
20.	Solar Photo Voltaic	NC II
21.	Arable Crop Production	NCII
22.	Computer Software Application and Development	HND

Appendix III: CBT Programmes as of January, 2023 (https://ctvet.gov.gh/accredited-programmes-2/)

	COMMISSION FOR TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (CTVET)					
	CBT PROGRAMME FOR PUBLISHING JANUARY 2023					
NO.	**TRADES**	**TRADE CODE**	**NTVETQ LEVEL**	**DATE OF APPROVAL**	**DATE OF EXPIRY**	**REMARKS**
1.	Computer Data Administration	ICT-CDA320A	NC I	28 April 2020	27-Apr-23	Ext. 30-Sept-2023
2.	Computer Networking System	ICT-CNS320A	NC I	28 April 2020	27-Apr-23	Ext. 30-Sept-2023

3.	Computer Software Development	ICT-CSD320A	NC I	28 April 2020	27-Apr-23	Ext. 30-Sept-2023
4.	Cashew Value Chain	AAA-CVC120A	NP I	28 April 2020	27-Apr-25	
5.	Cashew Value Chain	AAA-CVC220A	NP II	28 April 2020	27-Apr-25	
6.	Cashew Value Chain	AAA-CVC320A	NC I	28 April 2020	27-Apr-25	
7.	Cashew Value Chain	AAA-CVC420A	NC II	28 April 2020	27-Apr-25	
8.	Mango value Chain	AAA-MVC120A	NP I	28 April 2020	27-Apr-25	
9.	Mango value Chain	AAA-MVC220A	NP II	28 April 2020	27-Apr-25	
10.	Oil Palm Value chain	AAA-OPV120A	NC I	28 April 2020	27-Apr-25	
11.	Oil Palm Value chain	AAA-OPV220A	NC II	28 April 2020	27-Apr-25	
12.	Plumbing and Gas Technology	CON-PGT120A	NP I,	28 April 2020	27-Apr-25	

13.	Plumbing and Gas Technology	CON-PGT220A	NP II	28 April 2020	27-Apr-25	
14.	Plumbing and Gas Technology	CON-PGT320A	NC I	28 April 2020	27-Apr-25	
15.	Plumbing and Gas Technology	CON-PGT420A	NC II	28 April 2020	27-Apr-25	
16.	Block Laying and Tiling	CON-BLT120A	NP I	28 April 2020	27-Apr-25	
17.	Block Laying and Tiling	CON-BLT220A	NP II	28 April 2020	27-Apr-25	
18.	**Furniture Works**	CON-FUW120A	NP I	28 April 2020	27-Apr-25	
19.	**Furniture Works**	CON-FUW220A	NP II	28 April 2020	27-Apr-25	
20.	Welding & Fabrication	CON-WFT120B	NP I	28 April 2020	27-Apr-25	
21.	Welding & Fabrication Technology	CON-WFT220B	NP II	28 April 2020	27-Apr-25	

22.	Welding & Fabrication Technology	CON-WFT320B	NC I	13-May-16	12-May-21	Ext. 30-Sept-2023
23.	Welding & Fabrication Technology	CON-WFT420B	NC II	13-May-16	12-May-21	Ext. 30-Sept-2023
24.	Electrical Installation	EEA-ELI120A	NP I	28 April 2020	27-Apr-25	
25.	Electrical Installation	EEA-ELI220A	NP II	28 April 2020	27-Apr-25	
26.	Electronics	EEA-ELS120A	NP I	28 April 2020	27-Apr-25	
27.	Electronics	EEA-ELS220A	NP II	28 April 2020	27-Apr-25	
28.	Welding (Oil and Gas)	EOG-WEL420A	NC II	28 April 2020	27-Apr-25	
29.	Mechanical (Oil and Gas)	EOG-MEC420A	NC II	28 April 2020	27-Apr-25	
30	Hydraulics Technology	EOG-HYT420A	NC II	28 April 2020	27-Apr-25	
31.	Instrumentation Technology	EOG-INT420A	NC II	28 April 2020	27-Apr-25	
32.	Well Control	EOG-WEC420 A	NC II	28 April 2020	27-Apr-25	

33.	Cosmetology	COW-COS120B	NP I	28 April 2020	27-Apr-25	
34.	Cosmetology	COW-COS220B	NP II	28 April 2020	27-Apr-25	
35.	Make-Up Artistry	COW-MUA320A	NC I	28 April 2020	27-Apr-25	
36.	**Garment Making**	TEA-GAM120B	NP I	28 April 2020	27-Apr-25	
37.	**Garment Making**	TEA-GAM120B	NP II	28 April 2020	27-Apr-25	
38.	Automotive Mechanic	ASD-AUM120B	NP I	28 April 2020	27-Apr-25	
39.	Automotive Mechanic	ASD-AUM220B	NP II	28 April 2020	27-Apr-25	
40.	Computer Data Administration	ICT-CDA420A	NC II	28 July 2020	27-Jul-23	
41.	Computer Networking System	ICT-CNS420A	NC II	28 July 2020	27-Jul-23	

42.	Computer Software Development	ICT-CSD420A	NC II	28 July 2020	27-Jul-23	
43.	Make-Up Artistry	COW-MUA420A	NC II	9 October 2020	8-Oct-25	
44.	Solar Photo Voltaic Technology	EOG-SPV320A	NC I	9 October 2020	8-Oct-25	
45.	Bio-digester Construction	CON-BDC321A	NC I	17 December 2021	16-Dec-26	
46.	Bio-digester Construction	CON-BDC421A	NC II	17 December 2021	16-Dec-26	
46.	Building Construction Technology	CON-BCT321A	NC I	17 December 2021	16-Dec-26	
48.	Building Construction Technology	CON-BCT421A	NC II	17 December 2021	16-Dec-26	
49.	Telecom and Networking	TEL-TEN321A	NC I	17 December 2021	16-Dec-26	
50.	Wood Construction Technology	CON-WCT122A	NP I	10 May-22	9-May-27	

51.	Wood Construction Technology	CON-WCT222A	NP II	10-May-22	9-May-27	
52.	Wood Construction Technology	CON-WCT322A	NC I	10-May-22	9-May-27	
53.	Wood Construction Technology	CON-WCT422A	NC II	10-May-22	9-May-27	
54.	Wood Construction Technology	CON-WCT522A	HND	10-May-22	9-May-27	
55.	Textiles Design Technology	TEA-TDT122A	NP I	10-May-22	9-May-27	
56.	Textiles Design Technology	TEA-TDT222A	NP II	10-May-22	9-May-27	
57.	Textiles Design Technology	TEA-TDT322A	NC I	10-May-22	9-May-27	
58.	Textiles Design Technology	TEA-TDT422A	NC II	10-May-22	9-May-27	
59.	Textiles Design Technology	TEA-TDT522A	HND	10-May-22	9-May-27	
60.	**Furniture Design Technology**	CON-FDT122A	NP I	10-May-22	9-May-27	

61.	**Furniture Design Technology**	CON-FDT222A	NP II	10-May-22	9-May-27	
62.	Furniture Design Technology	CON-FDT322A	NC I	10-May-22	9-May-27	
63.	Furniture Design Technology	CON-FDT422A	NC II	10-May-22	9-May-27	
64.	Furniture Design Technology	CON-FDT522A	HND	10-May-22	9-May-27	
65.	Garment Making and Fashion Design Technology	TEA-GFT322A	NC I	10-May-22	9-May-27	
66.	Garment Making and Fashion Design Technology	TEA-GFT422A	NC II	10-May-22	9-May-27	
67.	Garment Making and Fashion Design Technology	TEA-GFT522A	HND	10-May-22	9-May-27	
68.	Mechatronics	EAE-MEC322A	NC I	10-May-22	9-May-27	

69.	Mechatronics	EAE-MEC422A	NC II	10-May-22	9-May-27	
70.	Mechatronics	EAE-MEC522A	HND	10-May-22	9-May-27	
71.	Hospitality and Catering Management	TOH-HCM122A	NP I	10-May-22	9-May-27	
72.	Hospitality and Catering Management	TOH-HCM222A	NP II	10-May-22	9-May-27	
73.	Hospitality and Catering Management	TOH-HCM322A	NC I	10-May-22	9-May-27	
74.	Hospitality and Catering Management	TOH-HCM422A	NC II	10-May-22	9-May-27	
75.	Hospitality and Catering Management	TOH-HCM522A	HND	10-May-22	9-May-27	
76.	Automotive Engineering Technology	ASD-AET322A	NC I	10-May-22	9-May-27	
77.	Automotive Engineering Technology	ASD-AE422A	NC II	10-May-22	9-May-27	

78.	Automotive Engineering Technology	ASD-AET522A	HND	10-May-22	9-May-27	
79.	Electrical Engineering Technology	EAE-EET322A	NC I	10-May-22	9-May-27	
80.	Electrical Engineering Technology	EAE-EET422A	NC II	10-May-22	9-May-27	
81.	Electrical Engineering Technology	EAE-EET522A	HND	10-May-22	9-May-27	
82.	Electronic Engineering Technology	EAE-ElET322A	NC I	10-May-22	9-May-27	
83.	Electronic Engineering Technology	EAE-ElET422A	NC II	10-May-22	9-May-27	
84.	Electronic Engineering Technology	EAE-ElET522A	HND	10-May-22	9-May-27	
85.	Agriculture Mechanisation	AAA-AGM122A	NP I	10-May-22	9-May-27	
86.	Agriculture Mechanisation	AAA-AGM222A	NP II	10-May-22	9-May-27	

87.	Agriculture Mechanisation	AAA-AGM322A	NC I	10-May-22	9-May-27	
88.	Agriculture Mechanisation	AAA-AGM522A	HND	10-May-22	9-May-27	
89.	Poultry Production	AAA-POP222A	NC II	10-May-22	9-May-27	
90.	Agripreneurship	AAA-AGP422A	NC II	10-May-22	9-May-27	
91.	Solar Photo Voltaic	AEA-SPV322A	NC I	10-May-22	9-May-27	
92.	CAD-CAM	ICT-CAC422A	NC II	25-Oct-22	24-Oct-27	
93.	Tree Crop Production	AAA-TCP422A	NC II	25-Oct-22	24-Oct-27	
94.	Livestock	AAA-LIV422A	NC II	25-Oct-22	24-Oct-27	
95.	Artefact Design-Jewellery	STM-JEW122A	NP I	25-Oct-22	24-Oct-27	
96.	Artefact Design-Jewellery	STM-JEW222A	NP II	25-Oct-22	24-Oct-27	

97.	Artefact Design-Jewellery	STM-JEW322A	NC I	25-Oct-22	24-Oct-27	
98.	Artefact Design-Jewellery	STM-JEW422A	NC II	25-Oct-22	24-Oct-27	
99.	Artefact Design-Beading	STM-BEA122A	NP I	25-Oct-22	24-Oct-27	
100.	Artefact Design-Beading	STM-BEA222A	NP II	25-Oct-22	24-Oct-27	
101.	Artefact Design-Beading	STM-BEA322A	NC I	25-Oct-22	24-Oct-27	
102.	Multimedia Practice	MEE-MUP122A	NP I	25-Oct-22	24-Oct-27	
103.	Multimedia Practice	MEE-MUP122A	NP II	25-Oct-22	24-Oct-27	
104.	Multimedia Practice	MEE-MUP122A	NC I	25-Oct-22	24-Oct-27	
105.	Multimedia Practice	MEE-MUP122A	NC II	25-Oct-22	24-Oct-27	
106.	Solar Photo Voltaic	AEA-SPV422A	NC II	20- Dec. 22	19 - Dec. 27	

107.	Arable Crop Production	AAA-ACP422A	NCII	20- Dec. 22	19 - Dec. 27	
108.	Computer Software Application and Development	ICT-CSA522A	HND	20- Dec. 22	19 - Dec. 27	

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