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Stakeholders' perception of inclusive and quality technical and vocational education training in the Sunyani municipality of Ghana

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Abstract: The study examined stakeholders' perception of inclusive and quality technical and vocational education training in Ghana. Adopting a case study approach with mixed methods research design, the study used a simple random sampling to select 288 stakeholders comprising 258 students and 30 teachers for a survey and eight officials from relevant institutions for key informant interviews. The quantitative data was analysed using SPSS 24 to generate descriptive statistics such as mean and standard deviation while the qualitative data was analysed manually by theming the responses. The analysis revealed that stakeholders have confidence that technical and vocational education training (TVET) is providing learners with foundational and higher-order skills but underscored that it is not sustainable in its current state. The study argues that enhancing the inclusiveness and quality of TVET requires comprehensive policy reforms and transformative program development to enhance capacity building, skills development, and improved employability of TVET graduates.

Keywords: foundational and higher-order skills; inclusive and equitable quality education; technical and vocational education training; TVET; stakeholders' perception; Sustainable Development Goal 4; Ghana.

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1 Introduction

The twin forces of globalisation and technological advancement are driving global mobility of labour and thus, underscoring the need for specialised education and training to meet the diverse knowledge and skill demands (McGrath and Russon, 2023; Caves et al., 2021). However, there is a tendency to cling to traditional development priorities that often lead to shortage of skilled workforce (UNESCO, 2016). Consequently, the significance of skill development through technical and vocational education training (TVET) has received strong attention in international and national educational policy agendas (Zelloth, 2014; Li and Pilz, 2023). For instance, the United Nations Educational, Scientific and Cultural Organization (UNESCO) promotes TVET on the grounds that market-driven TVET is more effective in job creation and improved income for the poor (UNESCO, 2016). Thus, TVET is recognised as a critical tool for improving economic competitiveness, social inclusion, poverty reduction, and sustainable development by providing learners with fundamental skills for personal and social development while responding to labour market trends. UNESCO (2016) further underscored the inclusion of vocational education and training (VET) in any transformative approach to development as it offers credible and comprehensive skills systems for supporting individuals, communities, and organisations to generate and maintain enhanced and just livelihood opportunities.

In some developed countries such as Norway, Finland, Switzerland, United States, and Denmark, effective policies and good governance structures have been adopted for the enhancement of TVET and have made strides towards the development of critical skills and the creation of the best educational opportunities (WEF, 2017). In Sub-Saharan Africa, some countries have adopted similar policies and set up institutions to coordinate TVET planning based on labour market trends to ensure complementarities between education and employment creation (Shereni, 2020; Okolie et al., 2020). For instance, countries such as Chad, Ethiopia, Guinea, Senegal, Sierra Leone, Uganda and Zambia have prioritised TVET policies and initiatives in their national development policy while Cameroon, Côte d'Ivoire, Lesotho, Rwanda and Ghana are making efforts to develop vocational and professional training for the teeming youth (Haug, 2017).

The UN Sustainable Development Goal 4 aims to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'. In particular, the Goal emphasises the acquisition of foundational and higher-order skills at all stages of

education and development; greater and more equitable access to high-quality education at all levels, including TVET; and the knowledge, skills, and values necessary to function well and contribute to society. Achieving Goal 4 of the SDGs by 2030 requires that every child must be able to access and finish an inclusive, high-quality pre-primary, primary, and secondary education including both vocational and other types of schooling (Agbedahin, 2019). Increase in funding for quality education, making learning for people with disabilities more accessible and expanding of adult learning and education opportunities within a lifelong learning approach are the three ways of ensuring equal access to quality education. According to Odoom et al. (2016), the transmission and application of technical and vocational knowledge in industry is critical for both national and international competitiveness in Ghana.

Despite the recognition of the contribution to vocational and technical skills development in Ghana, there is a limited study on its quality and inclusivity. For instance, Nsiah-Gyabaah (2007) examined the missing link in education-industrial development as the low level of industrialisation is attributed to the neglect of TVET and training. Other studies examine challenges affecting TVET and TVET graduates in Ghana. For instance, Amedorme and Fiagbe (2013) examined challenges facing TVET in Ghana while Dasmani (2011) also studied the challenges affecting the practical skills acquisition of technical graduates. Furthermore, there are limited studies on the entrepreneurial skills of TVET students as many studies have focused on the situation of all graduates in Ghana. In the West African sub-region, studies on TVET have generally focused on Nigeria (e.g., Daluba and Odiba, 2013; Maigida et al., 2013), with limited studies in Ghana (e.g., Kissi et al., 2020; Dzeto, 2014). In particular, Kissi et al. (2020) examined the underlying strategies for improving entrepreneurial skills development of technical and vocational students in Ghana. Therefore, this study explores the inclusivity and quality of TVET in Ghana using Sunyani as a case study. Specifically, the study addressed the following questions:

- 1 What is the understanding of key stakeholders of the contribution of TVET to social and economic development?
- 2 What are the key components of inclusive and quality TVET?
- 3 How has TVET programmes provided foundational and higher-order skills to make graduates employable at all stages of education and development?

The insights from this study aim to engender further reforms in TVET education in Ghana. The educational system of Ghana has undergone unrelenting reforms with the aim of enhancing technical and vocational education to equip graduates with employable skills. The existing employment policy in Ghana prioritises a job-oriented vocational and technical education toward sustainable solutions for the rising unemployment situation focusing on vulnerable groups such as the youth, women and persons with disabilities through TVET as a tool for the acquisition of practical and applied skills (Kissi et al., 2020). TVET is essential for equipping graduates with technical and vocational skills that would enable them to be ready for productive livelihoods. Additionally, the Commission For Technical And Vocational Educational Training (COTVET) was established through the COTVET Act of 2006 (Act 781) with a mandate to design TVET policy towards the development of the human capital of Ghana. This mandate is far from realisation as joblessness among graduates continues to be on the rise as TVET policies have often been haphazardly implemented with minimal outcomes (Appiah-Kwapong et al., 2017;

Dzeto, 2014). The TVET curriculum requires 70% practical hands-on training and 30% of theory. However, the structure of the curriculum is virtually theoretical in many TVET institutions due to limited funding for teaching and learning materials, essential infrastructure and facilities (Dzeto, 2014).

2 Towards inclusive and quality TVET in Ghana

Inclusive education is conceptualised as an educational method that reaches out to impaired children and persons with special needs in order to integrate them into regular classrooms alongside other learners, where they can study without discrimination or feeling alienated (Haug, 2017). The UNESCO (2015) also defines inclusive education as “a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion from education and from within education”. In this regard, improved educational engagement of all kinds, including those with impairments, is critical. Thus, the goal of inclusive education is to provide a high-quality education while recognising and valuing diversity and considering each individual, including students with disabilities, in order to avoid any prejudice or discrimination. There are two types of inclusive education: narrow and broad inclusion. Narrow inclusion is concerned with a small group of individuals or students, whereas broad inclusion is concerned with ‘diversity and how schools might respond to these different pupils and others in society’ (Haug, 2017). The notion of inclusive education focuses on persons who have been excluded from educational possibilities for a long period such as children from low-income families, children from ethnic and linguistic minorities, girls (in certain countries), children from distant places, children with impairments or other special educational needs, and exceptional and talented children are among these groups (Eraut, 2004). According to Ramaahlo et al. (2018), the concept of inclusive education is based on eight key elements, that is, inclusion, accessibility, non-discrimination, reasonable accommodation, physical accessibility, availability, acceptability and adaptability.

The United Nations recognises the contribution of inclusive and quality education as a key component for the attainment of SDG 4. Sustainable Development Goal 4 seeks to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. Furthermore, target 4.4 of Goal 4 aims to ‘significantly increase the number of youth and adults with relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship.’ Similarly, target goal 4.5 seeks to ‘eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and women.’ The World Economic Forum (2017) observes that the SDG 4 can be achieved by creating an inclusive learning environment that is child-friendly, welcoming to all, safe, and free of harassment or abuse, as well as providing accessible infrastructure (school design, classroom layout, sanitation, water, and food) and maintaining networks with child services, primary healthcare, and special education services for advice and referral. Teachers must get continual training in excellent education and be sensitive to gender, ethnicity, and (dis)ability (Smith and Sheridan, 2019). Thus, the curriculum must be designed to accommodate various learning styles starting from the interest of children, relevant to the local culture and context and which focuses on academic and life skills accompanied by unbiased requisite learning

materials. Furthermore, positive role models should be available for all learners with an effective collaboration from all stakeholders through their commitments to inclusive and quality education in policies and financing (Haug, 2017).

In Ghana, more broadly, TVET seeks to provide young people with relevant and productive skill training that would enable them to meet the country's personnel demands at the secondary level in the domains of technology, industry, commerce, agriculture, and business (Boateng, 2012). There are over 721 senior high schools, public technical schools, and vocational institutions offering secondary vocational-technical education in the country (Kissi et al., 2020). There are also an estimated 700 vocational technical intuitions run by individuals, religious entities, and non-governmental organisations, that support these efforts, as does a thriving but uncontrolled apprenticeship system. The National TVET system is currently undergoing reforms to produce highly skilled workforces capable of supporting the development of the industrial sector and contributing to the country's long-term progress (Darvas and Palmer, 2014). In 2002, Ghana produced a two-volume education strategic plan (ESP) for the years 2003–2015. The ESP sought to increase and encourage possibilities for young people, especially out-of-school children and 'drop outs', to participate in technical and vocational programs. The goal was to boost a variety of technical and vocational curriculum to make them relevant to 'the real workplace' as well as increase the number of TVET institutions and polytechnics (Darvas and Palmer, 2014). The Plan identified ten policy goals that are divided into four categories: equity and access, quality improvement, educational management, and science, technology, and vocational education and training.

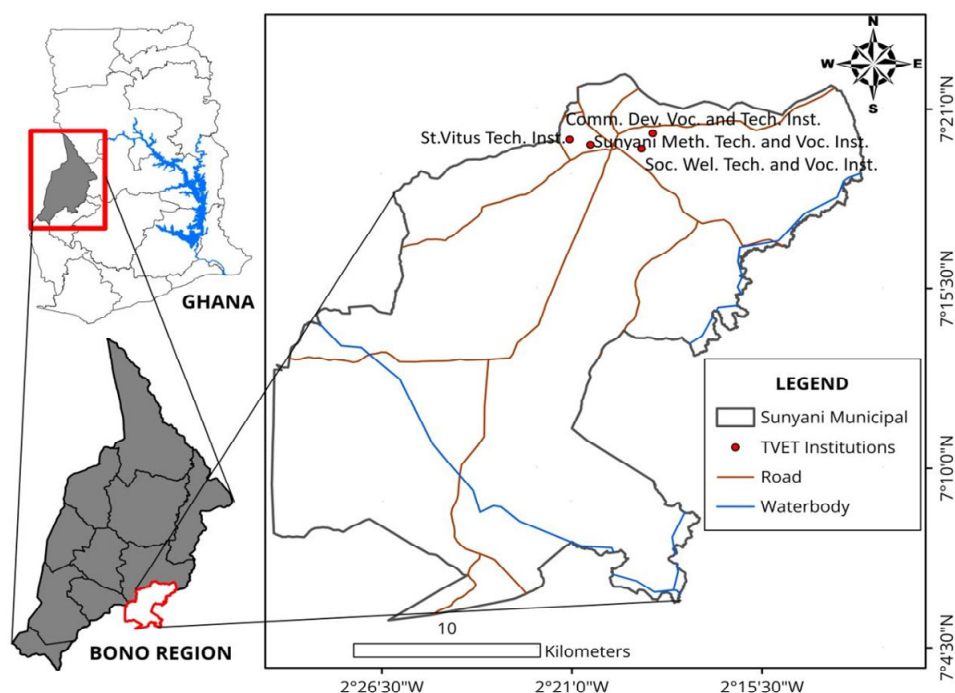
The COTVET was founded in 2006 with the goal of reforming the TVET system and to contribute to the creation of a productive workforce by integrating the educational system to economic demands. One of the most pressing issues facing TVET in Ghana is its acceptance, public perception of its quality and recognition of its value (Kissi et al., 2020; Appiah-Kwapong et al., 2017; Gakusi, 2010). In general, vocational education is still seen as having a lower status than traditional secondary education as majority tertiary institutions in Ghana do not recognise vocational qualifications earned through TVET institutions which reinforces this perception. Additionally, the government's penchant of failing to engage relevant stakeholders in TVET policy reforms and curriculum development also fuels the lack of change in public perceptions of TVET (Dzeto, 2014; Akyeampong, 2010). Another connected problem undermining the TVET system is access. For instance, persons with disabilities, girls and people from poor and disadvantaged backgrounds, for example, do not have equal access to TVET options (Darvas and Palmer, 2014). The majority of informal apprentices are generally men learning traditionally dominated male crafts such as carpentry, auto mechanic and welding. On the other hand, young women have fewer apprenticeship possibilities as those that exist are typically in traditionally female trade sectors with little market demand such as dressmaking, pottery and hair dressing. The issue, however, is much more than just the negative effects on productivity. A person's ability to establish independent and sustainable livelihoods is harmed when they are denied equal opportunity to engage in TVET. In this sense, concerns of poverty, disadvantage, and exclusion from skill development opportunities should be viewed normatively in terms of the rights and entitlements.

3 Method and study setting

3.1 Study setting

The study was undertaken in the city of Sunyani Ghana. Geographically, the city is located between the latitudes of 7° 20'N and 7° 05'N, and the longitudes of 2° 30'W and 2° 10'W, respectively.

Figure 1 Map of Sunyani Municipality (see online version for colours)



Source: Author's construct

The population of the city in 2021 was about 123,224 comprising 61,610 males and 61,614 females. The economy of the city is basically agrarian and enjoys food security throughout the year. There are TVET schools such as the Methodist Technical and Vocational Institute, Community Development Vocational and Technical Institute, Don Bosco Vocational Technical Institute, Social Welfare Vocational and Technical Institute, St. Vitus Technical School and Sunyani Business Senior High School. The city also has several higher educational institutions such as the University of Energy and Natural Resources, Catholic University of Ghana, Sunyani Technical University, Sunyani Nursing and Midwifery Training College, and the Greenfield College. These tertiary institutions run bachelor's, master's and doctoral degree programmes. Out of a total number of 356 schools in the municipality, 187 are public with the remaining 169 owned and managed by private individuals and institutions. These developments make Sunyani, a mid-sized, growth, and transition city a suitable site for this study as the findings may be fairly useful for rapidly growing cities with similar characteristics in the country and elsewhere.

3.2 Research design

The study adopted mixed methods research design to collect both qualitative and quantitative data on the inclusivity and quality of TVET in Ghana (Conway et al., 2008). The study population included current students, teachers and principals (managers) of the selected institutions, the municipal TVET coordinator, the regional coordinator of the National Vocational Training Institute and the municipal director of the labour office as the principal stakeholders of TVET. The study used both questionnaires and an interview guide. The questionnaire was responded to by students and teachers. Officials from the selected institutions such as the municipal TVET coordinator, the regional coordinator of the National Vocational Training Institute and the municipal director of the labour office were interviewed. Other officials selected from four TVET institutions in the city – Sunyani Methodist Technical and Vocational Institute, Community Development Vocational and Technical Institute, Social Welfare Vocational and Technical Institute and St. Vitus Technical School – were also interviewed. The total population of students and teachers as at the time the data was collected was 1030. The sample size was determined using the scientific methods by Tejada and Punzalan (2012):

$$= N / 1 + N(e)^2$$

With a population of 1,030 at 95% confidence level and 5% margin of error, where N = population, 1 = constant and e = level of precision.

$$= \frac{1,030}{(1,030 \times (0.05)^2) + 1} = 288$$

The simple random sampling technique was used to select the teachers and students. Teachers who teach different subjects and handle different classes were selected randomly. In the case of the students, those in their second and final years offering different TVET programmes in different classes in the various institutions were selected. First-year students were not included because admission was still ongoing at the time of sampling. This was done to obtain varied responses for holistic data for analysis. In the case of the interviews, the purposive sampling technique was used to select the principals and managers of the four selected TVET institutes, municipal TVET coordinator, the regional coordinator of the National Vocational Training Institute and the municipal director of the labour office. The questionnaire was adapted from Minghat and Yasin (2010) and Yunos et al. (2017). The quantitative data was analysed using SPSS 24 to generate descriptive statistics such as mean and standard deviation. The qualitative data collected through the key informant interviews was analysed manually by theming the responses for the discussion. The findings of the study were further validated qualitatively by interviewing TVET experts and tutors.

3.3 Socio-demographic characteristics of study participants

In order to understand the background characteristics of the respondents, their demographic information was assessed. The majority of the respondents were males totalling 202 representing 70% and the remaining 86 females representing 30%. The respondents' age is one of the most significant features in interpreting their views on the specific issues as age may influence the maturity level. The majority of 104(36%) of the

respondents were between the ages of 19–24 years, followed by those between the ages of 25 and 34 recording a frequency of 76(26%). Those between the ages of 15–18 were 42, while other respondents between the ages of 35 and above years were 48(17%) as shown in Table 3. Out of the 288 participants, 258 were students and the remaining 30 being teachers in the selected TVET institution. The results are presented in Table 3.

Table 1 Sample distribution for students

<i>S/N</i>	<i>Technical and vocational institute</i>	<i>Population (students)</i>	<i>Sampled</i>
1	Sunyani Methodist	411	115
2	Community Development	334	94
3	Social Welfare	126	35
4	St. Vitus Technical School	50	14
	Total	921	258

Source: Authors' construct

Table 2 Sample distribution for teachers

<i>S/N</i>	<i>Technical and vocational institute</i>	<i>Population (teachers)</i>	<i>Sampled</i>
1	Sunyani Methodist	59	16
2	Community Development	14	4
3	Social Welfare	29	8
4	St. Vitus Technical School	7	2
	Total	109	30

Source: Authors' construct

Table 3 Socio-demographic data of respondents

<i>Particulars</i>		<i>Freq.</i>	<i>Percent</i>
Gender	Male	202	70%
	Female	86	30%
	Total	288	100%
Age	15–18	59	21%
	19–24	104	36%
	25–34	76	26%
	35 or older	49	17%
	Total	288	100%
Status	Students	258	86%
	Teachers	30	14%
	Total	288	100%

Source: Authors' construct

4 Results

4.1 The contribution of TVET to social and economic development

Concerning the socio-economic contribution of TVET, the most ranked statement was that TVET has improved the state of livelihood of the graduates in the community with a mean of 3.39 and a standard deviation of 0.99. The respondents also agreed that TVET has promoted entrepreneurship (mean = 3.31, SD = 0.90) underscoring that TVET programmes contain entrepreneurial training to encourage self-employment. The respondents also agreed that TVET graduates were matching the skills supply based on the increasing demand in the labour market (mean = 3.01, SD = 1.22).

The respondents however disagreed that TVET was linked to traditional trades and livelihoods. The social impact of TVET recorded a grand mean of 3.12. This implies that TVET has had a positive impact on social life and development.

Table 4 TVET's contribution to social and economic development

Rank	Social impact	N	Mean	SD
1	TVET has reduced the rate of social vices in the community	288	3.40	0.88
2	TVET has affected the attitude of the youth in the community	288	3.72	1.04
3	TVET graduates are highly recognised in this community	288	2.72	1.37
4	The community is involved in defining outcomes, assessments, and certification	288	2.64	1.55
Grand mean			3.12	

Source: Authors' construct

Table 4 TVET's contribution to social and economic development (continued)

Rank	Economic impact	N	Mean	SD
1	TVET has improved the state of livelihood of the people in the community	288	3.39	0.99
2	TVET has promoted entrepreneurship in the community	288	3.31	0.90
3	TVET graduates are matching supply with demand	288	3.01	1.22
4	TVET is linked to traditional trades and livelihoods in the community	288	2.14	1.36
Grand mean			2.96	

Source: Authors' construct

4.2 The inclusivity and quality of TVET

In terms of the key components of inclusive and quality education in relation to TVET, both males and females studied in the same learning environment (mean = 4.80, SD = 0.77). The institutions provide accommodation for students from distant places (mean = 4.76, SD = 0.86) and also students from ethnic and linguistic minorities were considered in TVET training (mean = 3.18, SD = 1.35) and thus all students are found to have a sense of belonging (mean = 3.17, SD = 1.22).

Table 5 Inclusiveness of TVET programmes

<i>S/N</i>	<i>Particulars</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
1	Both males and females study in the same learning environment	288	4.80	0.77
2	Institutions provide accommodation for students from distant places	288	4.76	0.86
3	Students from ethnic and linguistic minority are considered in training	288	3.18	1.35
4	All students have a sense of belonging	288	3.17	1.22
5	Curriculum addresses individual student's needs	288	3.15	1.31
6	Classrooms, buildings, district decisions and planning reflect the needs of students with disabilities	288	2.97	1.38
7	Training cost is affordable for people from low income households	288	2.03	0.30
Grand mean			3.44	

Source: Authors' construct

Also, the results show that the existing TVET curriculum addresses individual students' needs (mean = 3.15, SD = 1.31). However, it was revealed that the classrooms, buildings, and teaching and learning materials do not consider the needs of students with disabilities or special needs (Mean = 2.97, SD = 1.38). Furthermore, the training cost was found not to be affordable for people from low-income households (Mean = 2.03, SD = 0.30). In terms of the quality of TVET programmes, the quality of the classrooms and libraries for learning were not the best (mean of 2.98 and a standard deviation of 0.87). Also, the students believed that the quality of equipment used for the training was not standard as it recorded a mean of 2.57 and a standard deviation of 0.92. Also, the selected TVET schools lacked composting facilities, gardens, solar power generators and energy-efficient programming equipment. The workshop (size, light and noise conditions, location) was also found to not be conducive as it recorded a mean of 2.29 and a standard deviation of 0.94.

Table 6 Quality of TVET programmes

<i>S/N</i>	<i>Particulars</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
1	Quality of classroom learning (theory)	288	2.98	0.87
2	Quality of training equipment	288	2.57	0.92
3	Workshop (size, light and noise conditions, location)	288	2.29	0.94
4	Teaching methods instructors	288	2.11	0.91
5	Classrooms (size, light and noise conditions, location)	288	1.97	0.93
6	Quality of practical learning	288	1.75	0.77
7	Availability of technical equipment (lab equipment, computer lab, measuring instruments)	288	1.64	0.79
8	Supply of learning materials (e.g. textbooks, notebooks, and other stationeries)	288	1.57	0.54
Grand mean			2.11	

Source: Authors' construct

The respondents also observed that the teaching methods were not good (mean = 2.11, SD = 0.91) as well as the quality of practical learning also being inappropriate

(mean = 1.75, SD = 0.77). There was unavailability of technical equipment (lab equipment, computer lab, measuring instruments) with a mean of 1.64 and standard deviation of 0.79. The student also lacks a supply of learning materials like textbooks, notebooks, and other stationeries to assist in their learning (mean = 1.57, SD = 0.54). The students were also asked separately if they have done any apprenticeship training programmes (ATP) during their study. Out of the 258 students, 150 had undertaken an apprenticeship training with 108 failing to do so.

4.3 Foundational and higher-order skills

The respondents agreed that students were being provided with foundational and higher-order skills. The respondents also agreed that the students were being provided with soft skills such as English language and mathematics education. Soft skills such as information and communication technology were also being provided for the student (mean = 3.83, SD = 0.93). It was also revealed that the TVET institutions are providing entrepreneurship training to their students (mean = 3.65, SD = 1.07). The results are presented in Table 7.

Table 7 Provision of foundational and higher-order skills through TVET

<i>S/N</i>	<i>Statement</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
1	Theoretical learning	288	4.17	0.95
2	Soft skills (English, maths)	288	3.94	0.97
3	ICT course	288	3.83	0.93
4	Entrepreneurship course	288	3.65	1.07

Source: Authors' construct

Table 7 Provision of foundational and higher-order skills through TVET (continued)

<i>S/N</i>	<i>Statement</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
5	Career counselling	288	3.48	1.08
6	Industrial tour	288	3.13	1.42
7	Apprenticeship program	288	3.10	1.30
8	On-the-job training (OJT)	288	2.76	1.47
9	Practical learning	288	2.51	1.46
10	Green skills (environment-related)	288	1.97	0.87
	Grand total		3.25	

Source: Authors' construct

Also, it was found that the various TVET institutions were providing career development services for the students (mean = 3.48, SD = 1.08). The students were also undertaking an industrial tour as part of their training and the required apprenticeship program.

4.4 Institutional and policy responses to inclusive and quality TVET delivery

The key informant interviews were conducted with eight officials with leadership and managerial roles including headmaster (4), an officer of Ghana Enterprise Agency (formally NBSSI), the municipal TVET coordinator, the municipal labour officer, and the

NVTI regional coordinator as well as the principals of the selected institutions. In terms of reducing unemployment, it was revealed that the introduction of TVET has reduced employment among the youth in various communities. According to the municipal TVET coordinator:

Most young adults that were idling around in the communities were used to starting this institution and today they have their jobs and are training others. I personally know people that have their own jobs because of TVET programmes, and most prefer to do their own work because of the training they have received.

But it was revealed that lack of funds was affecting the TVET graduates, they are unable to buy most of the tools needed for the work. The official from the Ghana Enterprise Agency observed that:

Some of these graduates do approach us for financial assistance so they can start working, if these guys are provided with money they are ready to work and people prefer their work compared to those without TVET training.

Concerning reduction in social vices, it was also revealed that TVET institutions were helping to address social vice in the communities. The NVTI regional coordinator stated that:

Before these schools were introduced here some of the boys engaged themselves in smoking and unnecessary argument some of which resulted in fighting but since the school was established some of them have been trained in vocation keeping them busy and preventing them from misbehaving.

These observations were supported by the principals of the selected institutions. However, the principals were dominantly concerned about the dwindling budgetary allocation and infrastructural development and were afraid that the introduction of the Free Senior High School in Ghana coupled with the lack of training equipment and tools were further affecting enrolment in TVET programmes.

5 Discussion

5.1 *Stakeholders' understanding of the contribution of TVET to socio-economic development*

The study examined the extent to which key stakeholders appreciate the contribution of TVET to social and economic development. From the results, TVET is seen as a prerequisite for increasing economic competitiveness and promoting social cohesion and poverty reduction. Darvas and Palmer (2014) argue that TVET fosters sustainable development initiatives for industrial growth and complement governments push for creating structures that are conducive to economic and social development. As presented in Table 3, the stakeholders dominantly observed that TVET has reduced the rate of social vices in the community and has positively affected the attitude of the youth. This underscores the goal of Education for Sustainable Development espoused by UNESCO (2015) which allows every human being to acquire the knowledge, skills, attitudes, and values necessary to shape a sustainable future. However, the results show that there was disagreement that TVET graduates were highly recognised. The community was also not involved in defining outcomes, assessments, and certification. This contradicts the

findings of Haug (2017) that the quality of TVET can only be realised through the effective collaboration of governments, industry, TVET institutions and the general public at the national and local levels to co-produce sustainable solutions for the challenges undermining the quality of TVET. Billet (2011) claims that the social reproduction and transformation of occupational and vocational practices are only possible through the collaboration of educational institutions, industry, and governments.

Furthermore, in terms of TVET's contribution to job creation and economic development, it allows for flexibility in two ways. First, TVET provides broad-based technical knowledge and transversal skills on which multiple jobs can be built, and second, it provides workers with ongoing vocational training (Maclean and Pavlova, 2011). TVET skills are also essential for economic development through equipping young people with relevant skills that make them employable (Shereni, 2020). This affirms the claim of Akyeampong (2010) that post-secondary vocational education equips employees with the technical knowledge and skills necessary for agricultural, industrial, commercial, scientific, technological and economic development as well as for solving environmental problems. According to Agbedahin (2019), TVET offers in addition to general education, the acquisition of practical skills, attitudes, understanding, and knowledge relating to occupations in various sectors of economic and social life. Thus, TVET programmes facilitate the development of human resources to match the supply of and demand for skilled workers (Boateng, 2012). Scholars such as Nsiah-Gyabaah (2007) have attributed the low level of industrialisation in Ghana to the neglect of TVET.

However, Ansah and Ernest (2013) argue that the TVET system is loosely linked with industry and the partnership between TVET and industry should be strengthened to make it relevant. Otu (2015) observes that the TVET curriculum in Ghana generally seeks to provide practical on-hands training to enhance the rate of youth employment and entrepreneurial acumen. The 2002 Anamuah-Mensah Educational Reform Review Committee endorsed the formalisation of apprenticeship competency-based training that links with the world of work (GOG, 2004). However, to develop reliable skills in TVET programmes, teaching and learning strategies should be practical oriented using pragmatic teaching techniques such as demonstration, problem-solving, discussion, field trips (excursion), role play and internships. Internship training in the provision of TVET involves active collaboration between schools and industries for real-life work experience to expose learners to theories and concepts in TVET programmes by attaching them to industries where they are expected to practicalise the knowledge acquired (Kissi et al., 2020). Such an intervention is timely as TVET in terms of policy and relevance seeks to provide learners with fundamental skills to support professional skill development to address gaps in the labour market (Kissi et al., 2020).

TVET is seen as crucial in equipping students with technical and vocational skills required for pursuing fulfilling professional paths (Kissi et al., 2020). Thus, the study's results offer useful and original perspectives on improving the quality and inclusivity of TVET programs. This requires personalised approaches to enhance the technical and vocational abilities of TVET students through improving teaching methods, resources, and equipment. Getting students involved in every aspect of their education is crucial as studies indicate that this method inspires students to assume responsibility for their learning and development (Martínez-Morales and Marhuenda-Fluixá, 2020; Avis, 2020). Furthermore, when the classroom setting fosters the development of cognitive abilities, it allows students to improve their creativity by engaging in various learning opportunities.

From the foregoing and based on the results, TVET needs to prioritise hands-on activities, not just rely on theories.

5.2 The inclusivity and quality of TVET

The results demonstrate that the existing TVET curriculum addresses individual students' needs. However, it was revealed that it was not affordable and that the classrooms, buildings, and teaching and learning materials do not consider the needs of students with disabilities or special needs. In terms of the quality of TVET programmes, the quality of the classrooms and libraries for learning were not good while the quality of equipment used for the training were below standard. Similarly, Kissi et al. (2020) identified challenges undermining TVET in Ghana to include inadequate training resources, tutors' training not tailored to the emerging technological advancement, insufficient resources and infrastructure, lack of industrial collaboration and readiness of the job market to absorb graduates from TVET. According to UNESCO (2015), the learning environments for TVET should include computers for pedagogical purposes and adapted infrastructure and materials for students with disabilities. Yunus et al. (2017) further observe that the effectiveness of TVET teaching and learning models should be moderately content-oriented with strong emphasis on current trend of skill development, especially in the aspect of technology, social, and environment. This is supported by Amedorme and Fiagbe (2013) that TVET institutions are places for building practical knowledge and skills along with basic theories in the chosen field of study.

5.3 Role of TVET in developing foundational and higher-order skills

From the results, as indicated in Table 4, students were being provided with foundational and higher-order skills such as carpentry and joinery, masonry, electrical and automation engineering, pottery, leather works, bead making, mathematics education as well as soft skills such as English language and ICT. This implies that students are developing the required foundational and higher-order skills. The findings are consistent with the extant literature (Kissi et al., 2020; McGrath and Russon, 2023). When the curriculum focuses on the needs and desires of learners, it enhances the achievement of predetermined learning objectives as it allows the student to be creative and innovative leading to an enhancement of their sense of competence and self-worth (Marra et al., 2014). Learners are the fulcrum of all teaching and learning and thus, educators and administrators should foster methods that are learner-centred. According to Boadway and Keen (2010), TVET policies in Ghana aim to establish industry-led and demand-driven competency-based training (CBT) to promote equitable access, opportunities, and career pathways for students to develop their vocational, technical, and generic skills. Zelloth (2014) contends that CBT ensures that the theoretical and practical education are integrated appropriately to prepare students for the workplace. This implies the TVET institution is providing their students with the necessary soft skills as demanded in the contemporary job market. For instance, Gillard (2009) argues that employers are increasingly emphasising the need for new 'soft' skills such as communication, negotiation, and team working in addition to technical knowledge and ability. According to Darvas and Palmer (2014) and Ayentimi et al. (2018), technical and vocational training should provide a combination of knowledge and career-oriented, hands-on, skill-based education needed to run a productive area of an economy. Consequently, the provision of career counselling, industry tours and

apprenticeship opportunities can be beneficial to the students (Papier and McBride, 2018; Okolie et al., 2020).

6 Conclusions

The study explored the inclusivity and quality of TVET in Ghana. The findings show that TVET graduates were not fully recognised although it offers relevant foundation skills and has improved the livelihoods of the graduates. This was attributed to the non-involvement of the public and industry in defining learning outcomes, assessments, and certification of TVET training programmes. Also, TVET programmes are generally inclusive; males and females have equal opportunities in accessing it and study in the same learning environment. Nonetheless, the classrooms, buildings, district decisions and planning does not reflect the needs of students with disabilities and also the training cost is not affordable for people from poor and disadvantaged backgrounds. Thus, the poor are excluded, defeating the purpose of holistic and inclusive TVET. In terms of quality, the unavailability of technical equipment (lab equipment, computer lab, measuring instruments, etc.) undermine the delivery of practical, hands-on and modern technology-based TVET programmes. This was further hindered by the inadequate supply of learning materials such as textbooks, notebooks, and other stationeries to aid effective learning and skill development.

Based on the findings, the government through COTVET must renew efforts to develop the infrastructural capacity of TVET by providing adequate teaching and learning materials, workshop/laboratories, ICT facilities and tools/equipment for students' practical works. Effective and active collaboration between industry and TVET institutions should be forged through policy incentives to enhance skill development of students. The novelty of study lies in its findings which were based on empirical data from key stakeholders – students, tutors, principals, industry and educational leaders – that could form the basis for policymaking and curriculum development in developing countries with similar context. However, based on the findings and the apparent limitations of the study, there is the need for an in-depth study to examine national and local-level implementation of the TVET policy reforms in Ghana. Also, the contribution of TVET in transferring essential 21st Century skills such as information technology, effective communication, and collaboration and partnerships to make graduates ready for the labour market is needed. The insights from such study will offer pathways for bridging the gaps – between TVET institutions and industry as well as enhance the relevance and appeal of TVET to industry and the public.

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