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# Causes for the falling standards of technical and vocational education and training (TVET) in Ghana

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### Abstract

In order to prepare the country's technical workforce for rapid industrialization and national development, technical and vocational education and training (TVET) has proven to be one of the most effective human resource development techniques. The researcher used this as the foundation for her investigation into the factors contributing to the declining levels of craft practice skills in technical and vocational institutions. The study focused on how cooperation between practical skill display and workshop process instruction might improve skill acquisition and training by examining the current environment in which the TVET system in the nation operates. For the purpose of collecting data for this project, questionnaires and interviews were chosen as the primary data collection methods. The heads of the chosen technical and vocational institutes were interviewed, while students and instructors were surveyed using questionnaires. According to the survey, the majority of technical institutes lack adequate infrastructure, which has an impact on the standard of instruction provided there. The allotted time for workshop practice is insufficient. The institutes are also plagued by inadequate oversight and monitoring. Students are not required to have an industrial attachment, and the institutions do not take them on excursions to the workplace. Although the curriculum being employed is not industry-driven, TVET graduates find it challenging to obtain employment after graduation. According to the report, the state of technical and vocational schools now has a significant impact on how well students score on exams as compared to previous years. Therefore, it is advised that the government make significant investments in the TVET sector and make itself available for collaboration with business organizations.

**Keywords:** Technical, vocational, education, standards and training

### 1. Introduction

Every country's development process must focus on technical and vocational skills development (TVSD), which has emerged over the past five years as a crucial approach that is directly related to growth, development, poverty reduction, and job creation. Technical and vocational education and training (TVET) has undergone numerous reformations throughout the years, both in Ghana and other Sub-Saharan African nations.

Several national and sectoral documents and policies, including but not limited to: Ghana's Poverty Reduction Strategies (GPRS I and II), The New Education Reform 2007 (NER), the draft Long Term Development Plan 2008-2015, the Private Sector Development Strategy 2010-2015 (PSD II), the revised Education Strategic Plan (ESP) 2010-2020, and the 2004 TVET Policy Framework that resulted in the passage of Act 718, have reflected this re-engineering and repositioning. The fundamental goals of these strategies and policies, as well as the founding of the Council, are to direct and reorganize Ghana's TVET system and advance technical and vocational skills development (TVSD). It is important to note that the New Education Reform (NER) of 2007 further shifted the national education policy's emphasis towards post-basic education, with a renewed emphasis on skills development and science and technology as key focal areas where reforms, new policies, investments, and partnerships need to be pursued in order to increase economic competitiveness, create jobs, and reduce poverty. This has been the country's policy direction in terms of technical and vocational reformation. As stated by Baffour-Awuah, Thompson, and Mathevu (2012)<sup>[5]</sup> Yalew 2022)<sup>[18]</sup> and Baffour-Awuah, Mathevu, and Baffour-Awuah (2012)<sup>[5]</sup>, technical and vocational education is the means of achieving national development.

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The academic performance of students in technical and vocational institutions in the country has received much attention in the Ghanaian educational system. At the beginning of each academic year, educational stakeholders raise a lot of concerns about the falling performance of students, especially those from technical and vocational institutions, who perform far below international standards.

When Quansah (1997)<sup>[10]</sup> examined the National Criterion Reference Test (CRT), she found that technical and vocational students across the country had a poor understanding of workshop practice abilities. Again, according to a performance analysis by Teal (2010)<sup>[20]</sup>, just 34% of students who took the NVTI exams in 2009 and attended public technical universities passed them, compared to 41% of those who attended private technical institutions. The research of Preddy (2012)<sup>[21]</sup>, who conducted a comparison analysis and discovered a 31% pass percentage in the craft practice exams of the NVTI examinations in the 2010 examinations, added to Teal's findings.

Numerous TVET graduates have struggled to obtain employment and continue their education as a result of the circumstances. Concerning Ghana's declining technical and vocational education standards, many stakeholders have expressed a number of concerns. This study is intended to investigate the explanations behind the declining levels of technical and vocational education and training (TVET) in Ghana (Legese *et al.*, 2019; Koyiri, 2018)<sup>[11, 9]</sup>. It is only natural that any situation has a cause or reason for its development.

## 2. Literature Review

### Causes of falling standards in TVET in Ghana?

#### Enrolment in TVET Institutions

Beginning with independence Technical vocational education and training has traditionally been highlighted by Ghana as the sector that will supply its middle-level personnel base for faster development. Unfortunately, little has been accomplished in this regard. Enrollment in TVET institutions has remained constant over the past few years at around 18,000 students (MOESS 2007)<sup>[17]</sup>.

Even though enrollment in educational institutions across the nation has grown greatly in recent years, the growth has largely been in business-related degrees rather than science and technology programs. This is taking place despite government-approved standards that favours business-related programs 60:40 over science and technology-related programs. This may indicate that graduates with a business background are more in demand in the formal and unofficial job market than graduates with a technical, vocational, or scientific background. The necessity for demand-driven policies is suggested by proposals to change the TVET curriculum to assist in the development of core competencies and generic skills and raise the likelihood that TVET graduates would be able to meet shifting labour market demands.

According to Lewin (2006)<sup>[12]</sup>, another enrollment difficulty faced by TVET institutions is that after the Education Reforms of 1987, the public's perception and attitudes towards technical and vocational education altered. It is currently thought of as a professional option for those with less academic aptitude. The lack of rigorous academic standards for entry into Technical and Vocational Education and Training (TVET) programs and the low chances for further education and career advancement have contributed to this impression.

The worst part is that governments and some institutions occasionally give the impression that the TVET track's main goal is to keep dropouts and "lockouts" from elementary and secondary school systems off the streets rather than promoting this type of training as a successful method for developing skilled workers for the labour market. Students that are "locked out" of moving up the educational ladder do so due to a shortage of openings at the next level, not to their academic performance.

#### Funding Challenges

According to Ghana's educational development history, there are two key obstacles facing TVET development objectives. First, ensuring that there is sufficient money and ongoing investment to support systematic growth; second, keeping an eye on the effectiveness of execution, particularly the degree to which pertinent institutions and structures are prepared to take on new duties and responsibilities.

Additionally, MOESS (2007)<sup>[17]</sup> asserted that the cost of TVET per student is high. Due to the lower student-to-teacher ratios, expensive training equipment, and expensive training materials that are "consumed" during practical sessions, unit costs in TVET institutions are predicted to be higher than in elementary and secondary schools.

The distribution of government expenditure on education (Ministry of Education, Science, and Sports Institutions only). Only 0.83% of the total education budget went to TVET. The President's Committee on Review of Education Reforms in Ghana (2002), alarmed at the neglect of and low budgetary allocation to TVET, recommended that "specifically, MOE should increase its allocation to TVET from about 1% to at least 7.5% and MMDE from about 12% to 20%". Rather than increasing, the budgetary allocation has decreased in percentage terms. The restricted channelling of students into TVET and the very low budgetary allocation to the subsector confirm UNESCO's (2003) observation that "skill acquisition in both the formal and informal sectors has very little government support as compared to the regular education system". According to Akyeampong, *et al.* (2007)<sup>[2]</sup>, TVET institutions do not have enough money to purchase training materials and equipment because of financial allocation restrictions (Amagnya, 2020; Abonyi & Sofu, 2021)<sup>[4, 3]</sup>.

#### Employment Challenges

In the technical and vocational sector, where it can be challenging to interpret credentials for placement on the employment ladder, the employability of TVET graduates has been a key concern. Afeti, *et al.* (2003)<sup>[11]</sup>, and Gowreesunkar, *et al.* 2019<sup>[8]</sup>, among others, imply that around two-thirds of TVET graduates are unemployed, despite the fact that no extensive tracer studies on TVET graduate employment have been conducted. Once more, this shows that a large portion of TVET has been supply-driven and has concentrated very narrowly on specialized training that is not in high demand from the market.

Ghana started implementing new educational reforms in September 2007. TVET and secondary education have both been given top priority in the reform initiatives. Senior secondary education was increased from three to four years in order to address concerns about quality, only to be changed back with a change of administration in 2009. With a renewed focus on preparing all students for admittance into postsecondary institutions or the job market through apprenticeship training in the private sector, technical and vocational education is being reorganized across the nation

(MOESS 2007) [17]. Although the adjustments may seem familiar, they appear to reflect fresh insights that are in line with global patterns and lessons learned from investing in education for economic growth. The new reforms have acknowledged that there is less distinction between academic, technical, and even vocational training and that students trained today need not only skills that are immediately useful in the workplace but also adaptable knowledge and skills that will allow them to change with the evolution of products and production techniques. The emphasis now is on TVET students' ability to apply the existing training and skill practices for more effective output through their education, for instance. As a result, the reforms seek to connect education with the workplace by creating programs that emphasize job market readiness through partnerships with private and public sector organizations (MOESS 2007) [17]. In order to improve the creation and design of programs specifically suited to the demands of the job market, a commitment has also been made to measuring, monitoring, and analyzing student flows. In order to encourage continued educational progress, a new education bill has been created that outlines new institutional duties and structures (Lugya, 2018) [13].

### Outmoded Curriculum

The curriculum is defined as "A course or a complete set of courses of a fixed series of prescribed study at school or college" by Mathews (1989). Given the current dynamic and technologically driven global development agenda, TVET in Ghana is driven by an outdated and useless curriculum. In addition, TVET is still taught using archaic methods, which renders it incompatible with the present ICT revolution in teaching and learning (Capel, *et al.*, 2019) [6].

The certification of the TVET program gradually moved from the City and Guilds of London Institute to the Technical and Vocational Examination Unit of Ghana in the early months of 1980. That called for a major review of the syllabus, therefore the newly reviewed structure, unlike the previous one, which took the form of a few specific workshop applications, as the following examples:

- The programme outlined the schemes of workshop practice which is complementary to the craft studies syllabus which was developed in detail.
- The schedules were intended for use progressively throughout the course and should be carefully coordinated with the teaching programme.
- The workshop instructor had a particular responsibility to ensure that safe working methods were fully understood before a student begins work with any new tool, machine or piece of equipment.
- Inadequate infrastructure development in TVET institutes

Lack of proper facilities, instructors with the necessary credentials, and equipment plague TVET colleges all over the nation. Due to the large number of young people who are unable to transfer into senior high schools each year, TVET appears unattractive to them in part for this reason. The necessity for COTVET and NVTI to continue and expand their ongoing interventions to modernize TVET infrastructure and offer cutting-edge TVET equipment should be pursued given the current national emphasis on skills training. King and Martin reported in 2002 that there are 474 senior secondary schools under the Ministry of Education, but only 23 state technical institutes and 29 vocational institutes. Only a few of the technical institutes, perhaps six, "are adequately

equipped to function relatively satisfactorily despite their many problems arising out of neglect and inadequate funding." In terms of facilities, resources, staffing, and funding for education and training, the others are in a worse position. The Technical and Vocational Unit of the Ministry of Education's handling of TVET has been utterly ineffective.

### 3. Methods and Materials

This study used both quantitative and qualitative case study methodologies, and its primary goal was to make discoveries. The case study approach was selected due to its ability to enable an in-depth investigation of a case and reveal significant concerns that might otherwise be missed by other approaches. Since this study attempted to address both a "descriptive question" about the reasons behind the decline in standards in technical and vocational education as well as an "explanatory question" about how it affects trainees, the case study approach was particularly suitable. Additionally, data was gathered by direct observation in a real-world setting, which gave the results more validity (Yin, 2006). The causes of the decline in TVET quality in Ghana and its effects on student trainees were the main topics of the study. The method of systematic random sampling was used by the researcher. The primary data collection tools utilized were questionnaires and interviews. Using SPSS v16, the collected data were coded and examined.

### 4. Result and Discussion

#### Demographic characteristics of the respondents

The Table 4.1 gives information about the demographic characteristics of the respondents surveyed

Table 4.1: Characteristics of the Respondents

Characteristics	Top Officials (%)	H.O.D & Tutors (%)	Students (%)
Gender			
Female	20	-	7.4
Male	80	100	92.6
Age groups under 20			20
20-25			80
45-55	26.7	63.6	
Above 55	73.3	36.4	
Level of education			
Technical & Vocational	57	63	100
Tertiary	43	37	

Three groups of respondents were surveyed. These people are department heads, tutors, and pupils. According to the table, 26.7% of the senior officials who were in the same year group as the H.O.D. and tutors were between the ages of 45 and 55. The majority (73.3%) of the top officials were over the age of 55. Over 80% of the pupils were between the ages of 20 and 25. Unlike the highest officials, who were split 80/20 from male to female, all H.O.D. and tutors were men. The gender split among the students was 92.6% male and 7.4% female. The two categories that were polled were pursued, comprising 80% of the total of these two groupings.

#### Analysis of the Causes for the falling standards of technical and vocational education and T Standard accessories and attachment for machine tools

#### Provision of adequate consumable tools and materials throughout the academic year

The results concern the provision of adequate consumable tools and materials for use in the institution throughout the academic year.



**Table 4.2:** Provision of adequate consumable tools and materials throughout the academic year

	Age				Total
	21-30	31-40	41-50	51 +	
Strongly Disagree	7(50.0%)	6(37.5%)	5(26.3%)	4(44.4%)	22(37.9%)
Disagree	3(21.4%)	3(18.8%)	8(42.1%)	5(55.6%)	19(32.8%)
Not sure	0(0.0%)	1(6.2%)	0(0.0%)	0(0.0%)	1(1.7%)
Agree	1(7.1%)	3	5(26.3%)	0(0.0%)	9(15.5%)
Strongly Agree	3(21.4%)	3(18.8%)	1(5.3%)	0(0.0%)	7(12.1%)
Total	14(100.0%)	16(100.0%)	19(100.0%)	9(100.0%)	58(100.0%)

Table 4.2 shows that the majority of respondents (N = 22, 37.9%) strongly disagreed with the statement that their institutions receive sufficient consumable tools and materials throughout the academic year. Additionally, 19 (32.8%) people disagreed with that statement. The results are also shown with respect to the respondents' age ranges from the survey.

**A schedule of workshop practice is in place in the institution**

The results on the whether there is a system in place in the institution to enhance the skill performance of students.

**Table 4.3:** Institution of a workshop practice to enhance the skill performance of students

	Age				Total
	< 18	19-23	24-29	30 +	
Strongly Disagree	7(7.5%)	1(4.5%)	0(0.0%)	1(25.0%)	9(6.2%)
Disagree	12(12.9%)	3(13.6%)	5(18.5%)	0(0.0%)	20(13.7%)
Not sure	1(1.1%)	0	1(3.7%)	0(0.0%)	2(1.4%)
Agree	38(40.9%)	6(27.3%)	8(29.6%)	2(50.0%)	54(37.0%)
Strongly Agree	35(37.6%)	12(54.5%)	13(48.1%)	1(25.0%)	61(41.8%)
Total	93(100.0%)	22(100.0%)	27(100.0%)	4(100.0%)	146(100.0%)

According to Table 4.3 results, the majority of respondents (N = 61, 41.8%) highly agreed that the institution has a schedule of workshop practice sessions to improve students' skill performance. The results also show that 54 respondents, or 37% of those surveyed, agreed with the statement that their schools hold practice workshops to help students improve their skills. The results have been broken down according to the respondents' ages.

**Provision of adequate consumable tools and materials throughout the academic year**

The results in Table 4.4 concern the provision of adequate consumable tools and materials for use in the institution throughout the academic year.

**Table 4.4:** Provision of adequate consumable tools and materials throughout the academic year

	Age				Total
	21-30	31-40	41-50	51 +	
Strongly Disagree	7(50.0%)	6(37.5%)	5(26.3%)	4(44.4%)	22(37.9%)
Disagree	3(21.4%)	3(18.8%)	8(42.1%)	5(55.6%)	19(32.8%)
Not sure	0(0.0%)	1(6.2%)	0(0.0%)	0(0.0%)	1(1.7%)
Agree	1(7.1%)	3	5(26.3%)	0(0.0%)	9(15.5%)
Strongly Agree	3(21.4%)	3(18.8%)	1(5.3%)	0(0.0%)	7(12.1%)
Total	14(100.0%)	16(100.0%)	19(100.0%)	9(100.0%)	58(100.0%)

Table 4.4 shows that the majority of respondents (N = 22, 37.9%) strongly disagreed with the statement that their institutions receive sufficient consumable tools and materials throughout the academic year. Additionally, 19 (32.8%) people disagreed with that statement.

**5. Further Discussion**

The study acknowledged that the majority of institutions did not have a planned plan of work for experiments as part of their course outlines at the time of the investigation. The survey also discovered that there were no established protocols for conducting practical experiments for the various levels of programs offered at the school. On the other hand, most institutions have implemented a schedule of workshop practice to improve the student's skill performance. The time allotted for workshop activities, in the opinion of the students, was insufficient for them to significantly improve their skills. However, the students think that they receive a planned system of supervision for their in-school activities involving the learning of practical skills. However, the instructors contradictorily denied the existence of any monitoring system in place to keep an eye on the pupils' performance. The system of workshop practice demonstrations to improve the performance of the students became a clear difficulty because insufficient consumable tools and materials were provided throughout the academic year. The lack of practical tools and equipment in the training workshops prevented effective practical teaching and learning from taking place, which was another factor in the study's identification of lowering standards.

Again, the investigation discovered that, in contrast to the metal-forming shops that were present, the institutes lacked bench-fitting businesses. Furthermore, at the technical institutes surveyed, the schools hardly adhere to the 1:1 student-to-machine ratio. The students were not required to participate in industrial attachment programs during the summer, and, on top of that, they were not brought on industrial trips while they were in class, which was a fascinating additional finding. All of these flaws contribute significantly to the alienation or detachment of students from industrial practices, which will enhance their employability after graduation. Once again, the curriculum in use did not take into account how quickly consumer expectations are changing. The instructors insisted that, in addition to their technical education, the pupils receive some kind of entrepreneurial training. The tutors, however, are happy with their working conditions and are not given any additional compensation for doing extra work. No accommodations are made for the tutors, either.

**6. Conclusions and Recommendation**

**From the findings, it can be concluded that**

- The TVETs do not have a developed scheme of work experiments as part of their course outlines.
- They do not have laid down procedures for practical experiments for the various levels of programs in the institutions.
- The time dedicated for workshop practice sessions for students is not enough.
- There are no organized structures of supervision for students' practice skills activities.
- There are also no mechanisms in place in the institutes designed to monitor the academic performance of the students.
- The institutions do not have standard accessories and

attachments for machine tools and equipment used for practicals.

- The institutes are also not provided with adequate consumable tools and materials throughout the academic year.
- The schools do not have a system of workshop practice demonstration sessions to enhance the performance of students.
- Also, the training workshops are not equipped with functional equipment and hand tools. In addition, they do not have bench fitting and metal forming shops.
- Again, the institutions do not also adhere to the student-machine-tools ratio.

## 7. Recommendation

- The government should make significant investments in this area of the education system. Government funding should be used to build state-of-the-art training workshops, machinery, tools, and equipment, as well as other facilities needed for efficient teaching and learning at technical institutions.
- To make technical and vocational education more efficient, the government should work toward reorganizing the entire system. To control the industry, national policies had to be developed. This necessitates a concentration on preparing pupils for the job market through apprenticeship training in the private sector or for admittance into tertiary institutions. TVET (Quality-Based TVET) is implementing quality assurance measures. Additionally, this policy would entail boosting the budgetary funding given to TVET institutions so they may purchase training tools and materials.
- The country should work with the private sector to provide technical and vocational education since doing so will encourage competition, which will lead to better service delivery. Adding new TVET institutions (Vocational Institutes, Vocational Training Centers, and Technical Industrial Schools) is another strategy to address community demands for technical and vocational education and training.

## 8. Suggestion for further study

A further study should be conducted to find out if consumable training materials should be supplied direct from the government to the training institutions.

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