UNIJERPS
Unizik Journal of Educational Research and Policy Studies VOL.14 (3);
https://unijerps.org
2021 Impact Factor: 5.641; 2020 Impact Factor: 5.355.
July-December, 2022
Indexing and Impact Factor URL: http://sjifactor.com/passport.php?id=21363

TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING FOR SUSTAINABLE DEVELOPMENT IN THE CENTRAL REGION OF GHANA

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ABSTRACT

The study investigated how Technical and Vocational Education and Training (TVET) could be engaged for Sustainable Development in the Central Region of Ghana. It adopted the qualitative research design, using the interview method. The results showed TVET as a veritable tool for sustainable development. It further revealed that the major challenge to the implementation of the TVET project in Ghana was the non-hybridisation of the country's educational systems. The available TVET institutions seem to be too few to make any significant impact; and thus, slowing down the attainment of the Strategic Development Goals (SDGs) in the country. Hence, it is imperative to expand TVET school systems in country, to enable it to maximise the benefits of TVET.

Keywords: Technical Education, Vocational Education; Training; Sustainable Development

Introduction

Technical and Vocational Education and Training (TVET) refers to all forms and levels of education and training which provide knowledge and skills related to occupations in various sectors of economic and social life through formal, non-formal and informal learning methods in both school-based and work-based learning contexts (UNESCO-UNEVOC, 2016, 2017; and UNESCO, 2018). It is a form of educations that make products to be suitable for a variety of jobs and also for self-employment. There is an increasing global emphasis on Sustainable Development Goals (SDGs) and Technical and Vocational Education and Training (TVET), but these efforts seem not to be directed towards using TVET to propel attainment of the SDGs. There is a rising consciousness of the ability of professionals in this sphere to stimulate economic development through gainful employment or self-employment. Growth and development are necessary phenomenon for human survival and future generations. This is because, individuals and societies need to grow and develop to meet their planned and unanticipated advances. Particularly, economic development is essential as it will improve quality of life.

Haller (2012) linked economic development and social growth to gains in humans' standard and quality of life, while Băcescu-Cărbunaru (2000) compared the standard of life and quality of life. It was indicated that standard of life concerns itself

with individual and a section of a population's achievement while quality of life mirrors the totality of natural, technical, economic, social, political, cultural, ethical and similar conditions in relation to biological, social and spiritual progress of the human beings in a society. Thus, standard of life can most likely be associated with growth while quality of life is linked to development of a society in its entirety. Economists of education have established a positive bi-lateral relationship between education and development (Psacharopoulos & Woodhall, 1997; Patrino & Psacharopoulos, 2018; Fabunmi, 2019). Education, particularly technical education, seems to be the major instrument that could propel the attainment of the SDGs.

According to the Department of Economic and Social Affairs Disability of the United Nations Organisation (na), in September 2015, the General Assembly of the UNO adopted the 2030 Agenda for Sustainable Development that includes 17 Sustainable Development Goals (SDGs). Building on the principle of "Leaving No One Behind", the new agenda places emphasis on a holistic approach to achieving sustainable development for all. The 17 sustainable development goals (SDGs) which were formulated for transforming the world are: (1) No Poverty; (2) Zero Hunger; (3) Good Health and Well-being; (4) Quality Education; (5) Gender Equality; (6) Clean Water and Sanitation; (7) Affordable and Clean Energy; (8) Decent Work and Economic Growth; (9) Industry, Innovation and Infrastructure; (10) Reduced Inequality; (11) Sustainable Cities and Communities; (12) Responsible Consumption and Production; (13) Climate Action; (14) Life Below Water; (15) Life on Land; (16) Peace and Justice Strong Institutions; and (17) Partnerships to achieve the Goal; Source (United Nations Organisation, na). SDG 4 is on quality education.

SDG 4 has 10 targets covering different aspects of education (UNESCO, na). There are seven targets which are expected outcomes and three targets which are means of achieving these targets, thus, making 10 in all. The SDG 4 targets are:

1) Universal primary and secondary education: Ensuring that by 2030, all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.
2) Early childhood development and universal pre-primary education: Ensuring that by 2030, all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.
3) Equal access to technical/vocational and higher education: Ensuring that by 2030, equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.
4) Relevant skills for decent work: Ensuring that by 2030, substantially increase the number of youth and

adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurs.

5) Gender equality and inclusion: Ensuring that by 2030, 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 children in vulnerable situations.
6) Universal youth literacy: Ensuring that by 2030, all youths and a substantial proportion of adults, both men and women, achieve literacy and numeracy.
7) Education for sustainable development and global citizenship: Ensuring that by 2030, that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.
8) Provision of effective learning environments: Building and upgrading education facilities that are child, disability and gender sensitive and also ensure very safe, non-violent, inclusive and effective learning environments for all.
9) Scholarships: Ensuring that by 2020, there is substantial expansion, globally, in the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programs, in developed countries and other developing countries.
10) Teachers and educators: Ensuring that by 2030, there is substantial increase in the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States.

The first seven are the expected outcomes, while the last three targets are means of achieving the first seven targets.

According to Billet (2011), Maclean (2011), McGrath (2011) and Porres, Wildemeersch and Simons (2014), the purposes of technical and vocational education and Training (TVET) include: (a) equipping learners with technical and professional skills which are needed for gainful employment; (b) preparing learners for self-employment; and (c) providing skilled middle and senior levels manpower

which are needed for accelerated socioeconomic and industrial development of the country. These qualities seem to make TVET to be amenable to self-employment. Going by the above purposes and advantages, TVET will enhance economic development and the attainment of SDGs, if it is well implemented.

The following features and advantages of TVET make it to be relevant in the promotion of economic development and attainment of SDGs, and SDG4 in particular: (i) improving the wellbeing of youths and communities; (ii) increasing productivity; (iii) empowering individual to become self-reliant; (iv) stimulating entrepreneurship; (v) promoting sustainable development (Billet, 2011; Maclean, 2011; McGrath, 2011; Porres, Wildemeersch and Simons, 2014).

In spite of the advantages of TVET, it seems to be an unattractive component of educational sector in most countries over the years. The possible reasons for this include (a) limited number of technical institutes available in most countries; (b) lack of facilities and materials for training students; (c) inadequate technical teachers or facilitators; (d) limited number of training institutions for technical teachers; (e) difficulty in career progression due to the negative public perception; (f) low quality of TVET graduates; (g) lower-paying jobs; (h) lack of social acceptability; (i) lack of industrial participation; (j) outdated training modules; and (k) inappropriate medium of instruction (Employers' Forum on Disability, 2009; Heart Trust NTA, 2009; Leney, 2009; Bacchetta and Jansen, 2011; Keevy, 2011; SADC and UNESCO, 2011; OECD, 2012; UNESCO, 2012a&b, 2013a,b,&c; Marope, Chakroun and Holmes, 2015).

The government of the Republic of Ghana is making frantic efforts to develop TVET and has established the Council for TVET and TVET Policies. The Council has drafted the Strategic Plan for TVET Transformation (2018-2022). The major challenge to the implementation of the TVET project in Ghana is the non-hybridisation of the country's educational systems. The TVET institutions seem to be too few to make any significant impact; and thus, slowing down the attainment of the SDGs in the country. Also, the global efforts on Sustainable Development Goals; and Technical and Vocational Education (TVET) seem not to be adequately coordinated towards using TVET to propel attainment of the SDGs in Ghana. In addition, researchers seem to have neglected investigating into any possible linkage between the two. Hence, this study seeks to address this crucial gap by investigating how TVET can be used to achieve SDG in Ghana.

Research Questions

The following research questions were formulated to guide this study:

1. What are the purposes of technical and vocational education and training (TVET) in Ghana?
2. What is the relevance of TVETin the promotion of economic development and

thus, attainment of SDGs, and SG4 in particular?
3. What challenges have bedevilled the provision of TVET in Ghana over the years? In other words, why has TVET been an unattractive segment of educational pursuit in the country over the years?
4. What interventions have been made in recent times by the Government of Ghana to provide quality and attractive TVET in Ghana?

Research Design and Method

The qualitative research design was adopted for this study, using the interview method. The target population comprised teachers in Technical Institutes in the Central Region of Ghana. The purposive sampling technique was used to select four out of the thirteen (30.8%) technical institutes in the region, from where 40 teachers were randomly selected as participants in the study. An interview guide containing only seven (7) items was constructed for the study. The instrument was subjected to validation by two experts in fields of instrument validation at the University of Cape Coast, Ghana. Simple percentages were the statistics used for data analysis. The percentage chosen for the purpose of decision making on the level of significance was a minimum of 50 percent.

Presentation of Results

This section is presented under the response rates and research questions as subheadings.

Table 1: Response Rates

S/N	School	Participants	Responses	Percentage
1	Asuansi Technical Institute	10	10	100.00
2	Boriwa Technical Institute	10	10	100.00
3	New Ebu Technical Institute	10	8	80.00
4	Cape Coast Technical Institute	10	9	90.00
Total		40	37	92.50

Research Question One: What are the purposes of technical and vocational education and Training (TVET) in Ghana?

Table 2: Purposes of Technical and Vocational Education and Training

S/N	Purposes	Participants	Agreed	Disagreed	Non-response	Percentage of agreed
1	Equipping learners with technical and professional skills which are needed for gainful employment.	37	33	3	1	89.19
2	Preparing learners for self-employment.	37	36	0	1	97.30
3	Providing skilled middle and senior levels manpower which are needed for accelerated socioeconomic and industrial development of the country.	37	37	0	0	100.00

Table 2 revealed the percentages of respondents who agreed that the purposes of technical and vocational education and Training (TVET) in Ghana: (1) equipping learners with technical and professional skills which are needed for gainful employment was 89.19 percent, (2) preparing learners for self-employment was 97.30 percent, and (3) providing skilled middle and senior levels manpower which are needed for accelerated socioeconomic and industrial development of the country was 100.00 percent. These results are in consonance with those of Billet (2011); Maclean (2011); McGrath (2011); and Porres, Wildemeersch and Simons (2014) who identified these as the purpose of TVET which could make it to promote economic development and ensure attainment of SDGs.

Research Question Two: What is the relevance of TVETin the promotion of economic development and thus, attainment of SDGs, and SG4 in particular?

Table 3: TVET and Promotion of Economic Development

S/N	Relevance	Participants	Agreed	Disagreed	Non-response	Percentage of agreed
1	Improving the wellbeing of youths and communities	37	35	0	2	94.59
2	Increasing productivity	37	36	0	1	97.30
3	Empowering individual to become self-reliant	37	37	0	0	100.00
4	Stimulating entrepreneurship	37	34	1	2	91.89
5	Promoting sustainable development	37	36	0	1	97.30

Table 3 indicates the percentages of respondents who agreed that the following constituted the relevance of TVET in the promotion of economic development and thus, attainment of SDGs, and SG4 in particular: (1) improving the wellbeing of youths and communities was 94.59, (2) increasing productivity was 97.30, (3) empowering individual to become self-reliant 100.00, (4) stimulating entrepreneurship 91.89, and (5) promoting sustainable development 97.30. These findings agree with the views of Employers' Forum on Disability (2009), Heart Trust NTA (2009), Leney (2009), Bacchetta and Jansen (2011), Keevy (2011), SADC and UNESCO (2011), OECD (2012), UNESCO (2012a&b, 2013 a, b & c) and Marope, Chakroun and Holmes (2015).

Research Question Three: What challenges have bedevilled the provision of TVET in Ghana over the years? In other words, why has TVET been an unattractive segment of educational pursuit in the country over the years?

Table 4: Challenges to TVET in Ghana

S/N	Challenges	Participants	Agreed	Disagreed	Non-response	Percentage of agreed
1	Limited number of technical institutes available in most countries	37	37	0	0	100.00
2	Lack of facilities and materials for training students	37	36	1	0	97.30
3	Inadequate technical teachers or facilitators	37	35	1	1	94.59
4	Limited number of training institutions for technical teachers	37	37	0	0	100.00
5	Difficulty in career progression due to the negative public perception	37	36	1	0	97.30
6	Low quality of TVET graduates	37	33	4	0	89.19
7	Lower-paying jobs	37	34	3	0	91.89
8	Lack of social acceptability	37	28	8	1	75.68
9	Lack of industrial Participation	37	37	0	0	100.00
10	Outdated training modules	37	36	1	0	97.30
11	Inappropriate medium of instruction	37	36	1	0	97.30

Table 4 shows the following as the percentages of respondents who agreed that the challenges included (1) limited number of technical institutes available in most countries was 100.00, (2) lack of facilities and materials for training students was 97.30, (3) inadequate technical teachers or facilitators was 94.59, (4) limited number of training institutions for technical teachers was 100.00, (5) difficulty in career progression due to the negative public perception was 97.30, (6) low quality of TVET graduates was 89.19, (7) lower-paying jobs was 91.89, (8) lack of social acceptability was 75.68, (9) lack of industrial participation was 100.00, (10) outdated training modules was 97.30, and (11) inappropriate medium of instruction was 97.30.These results agree with the perceptions of Employers' Forum on Disability (2009), Heart Trust NTA (2009), Leney (2009), Bacchetta and Jansen (2011), Keevy (2011), SADC and UNESCO (2011), OECD (2012), UNESCO (2012a&b, 2013a,b&c) and Marope, Chakroun and Holmes (2015). This study further established that the major challenge to the implementation of the TVET project in Ghana is the non-hybridisation of the country's educational systems. The few TVET institutions seem to be too few to make any significant impact; and thus, slowing down the attainment of the SDGs in the country.

Research Question Four: What interventions have been made in recent times by the Government of Ghana to provide quality and attractive TVET in Ghana?

Table 5: Interventions by the Government of Ghana

S/N	Interventions	Participants	Agreed	Disagreed	Non-response	Percentage of agreed
1	Government has provided free TVET	37	34	1	2	91.89
2	Government has provided infrastructure for some of the TVET school	37	36	1	0	97.30
3	More teachers have been recruited into the TVET schools to enhance teaching and learning	37	35	1	1	94.59

Table 5 revealed the following as the percentages of respondents who agreed that (1) Government has provided free TVET was 91.89, (2) Government has provided infrastructure for some of the TVET school was 97.30, and (3) More teachers have been recruited into the TVET schools to enhance teaching and learning was 94.59. The government of the Republic of Ghana has established the Council for TVET and TVET Policies. The Council has drafted the Strategic Plan for TVET Transformation (2018-2022). As at the time of conducting this research, there seemed not to be any literature on government interventions. However, this study confirmed the three interventions above as being made by the government.

Conclusion and Recommendations

The study established that Technical and Vocational Education and Training (**TVET)**as a veritable tool for sustainable development. It further revealed that the major challenge to the implementation of the TVET project in Ghana was the non-hybridisation of the country's educational systems. The few TVET institutions seem to be too few to make any significant impact; and thus, slowing down the attainment of the SDGs in the country. Hence, the it is imperative to expand TVET school system in Ghana. This will enable the country to maximise the benefits of TVET.

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