REVAMPING TVET PROGRAMMES THROUGH INDUSTRIAL COLLABORATIONS FOR YOUTH EMPOWERMENT AND EMPLOYMENT OPPORTUNITIES

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Abstract

The growth and technological sustainability of any society is dependent on technically skilled manpower from Technical and Vocational Education and Training (TVET) sincethey are expected to be the driving force behind economy development.This is however, not the case, because the TVET curriculum is faulty and devoid of the contents required for industrial collaboration that should equip the students with the right and current skills relevant to the society per time with the capability of turning out self-reliant and independent products. This paper proposed a model of adoption for revamping TVET programmes with Industrial collaboration that promote youth empowerment and employment opportunities. This research further carried out quantitative research to find the level of relevance of graduates employed directly with the present TVET curriculum. Structured Questionnaire was administered to a sample of 50 TVET employers from various organizations in Ogun and Lagos States, South-West Nigeria. Analysis was done using descriptive and inferential approach and results from the study revealed the weakness of the present curriculum used for TVET programmes as skills acquired are not sufficient for career take-off. This study, therefore, recommends that, the Present TVET curriculum should be thoroughly revamped to incorporate necessary input from the Industry throughindustrial collaboration to produce empowered and employable youths.

Keywords: TVET, TVET Curriculum, Industrial Collaboration, Technically skilled manpower

Introduction

The United Nations Educational Scientific and Cultural Organization (UNESCO) defined Technical and Vocational Education and training (TVET) as those aspects of educational process involving the addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (UNESCO, 2008; UNESCO, 2017). TVET according to Abdulraharam (2013) and Opatola *et al.* (2016) is a planned programme of courses and learning experiences that begins with exploration of career options, supports basic academic and the required skills for industry-defined work so as to transform Nigeria into a producer/manufactures nation from its present status of a consumer and importer nation. Technical and Vocational Education and trainingis a tool for empowerment, for sustainable livelihood and social economic development (Yusuff&Soyemi, 2015). This essence of establishing TVET should therefore be revisited and the Curriculum revamped to reflect purpose (Uwaifo, 2009; Yang, 2008).

Education is the vital tool for both human and economic development (Orji & Job, 2013), however formal education has failed particularly, TVET education in Nigeria because the focus of its establishment has been forgotten and the curriculum used for the delivery is void of the required content. The need for a total revamping of the curriculum at all levels of education and specifically TVETprogrammewhere the focus is on producing technically skilled manpower and tailor towards the need of the industry for youth empowerment and employment. Otherwise, the country may not be able to achieve the 21st century educational goal and standard required to address local challenges. To achieve this goal, there is no doubt that TVET curriculum should be revamped to incorporate industrial contents for competent and well skilled manpower so as attain global competitiveness (Okoye &Arimonu, 2016).

Proposed Model

Figure 1 is a method proposed by this study to revamp TVET programmes with Industrial content for collaboration that promotes technically skilled manpower for economic growth and development of the nation. The learning

process is divided into two parts. The first part is learning done within TVET programme and the second part is learning done in the Industry.The Curriculum is to be re-structured such that TVET courses are run within the first semesters of every session as shown in figure 1 below and the second semesters are done in the Industry. The idea is that after learning the basic concept, theoretical background of the courses and practical carried out within the TVET programme, then, the students proceed to the industry for the second semester where solutions to real life problems are implemented. The knowledge from their TVET programme gives the basic information required, the level of practical done in the programme also assist if having full comprehension of what they are taught to apply in the industry.

The industry shall also operate a learning centre where certain courses (theory and practical content) shall be taught. This will allow full coverage of the curriculum. The continuous processof this collaboration from the first year to the fourth year will eventually produce technically skilled manpower that is meet for the society.The proposed model shares the sessions equally among both TVET programme and the industry and by the end of the first two years, the student is mandated to proceed on a year Industrial Attachment as it is in the existingcurriculum. At their return, year 3 and year 4 are also shared equally by both TVET programme and the Industry. At the end of this collaborations, technically skilled manpower would have been built.
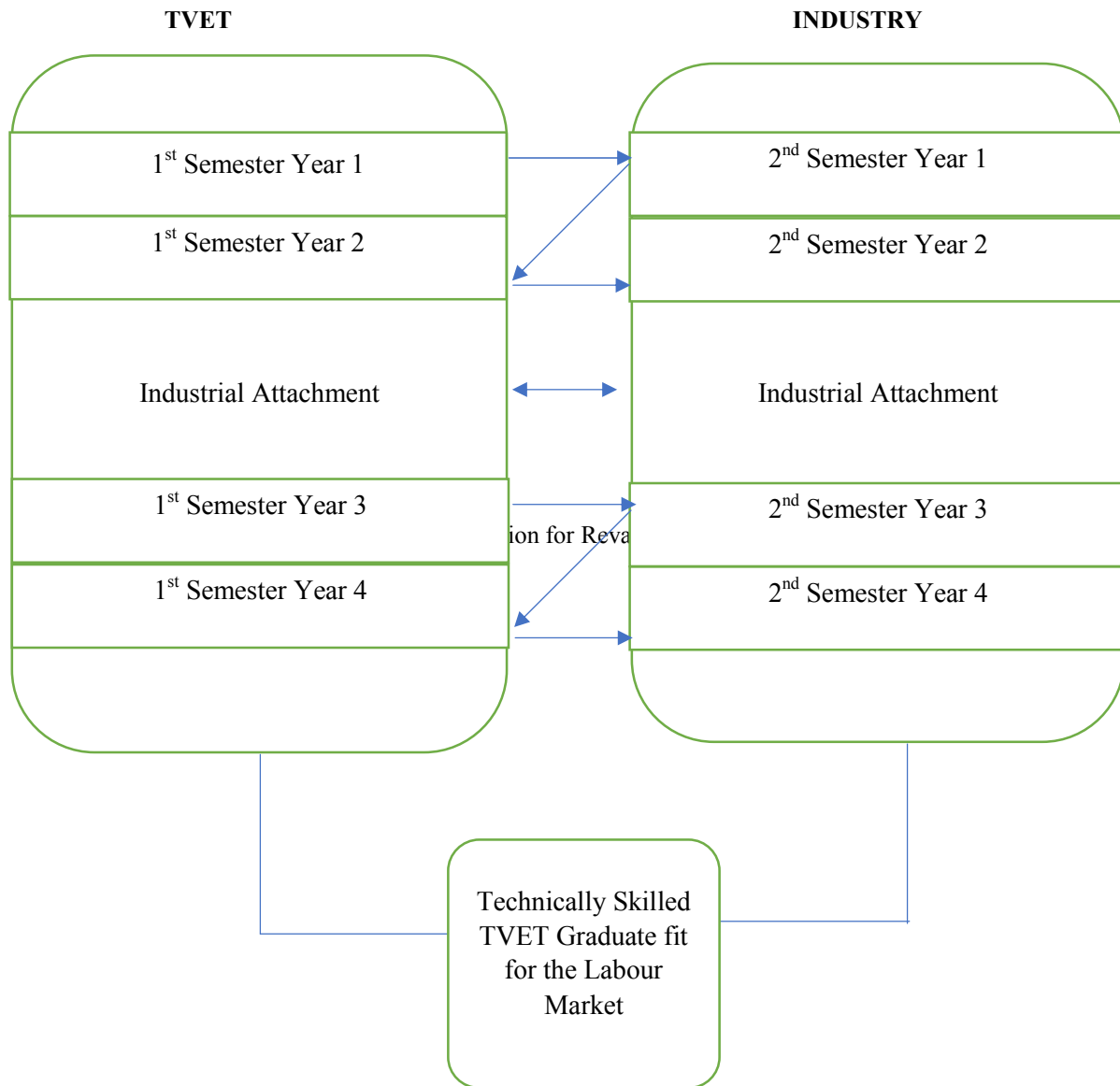
Methodology

Data Collection Method
Survey method was adopted in carrying out this research study. The surveyed data used was collected through structured questionnaire. The questionnaire was administered to a sample of 50 employers of TVET graduates in manufacturing, construction, production and information technology organizations in Lagos and Ogun, South-West Nigeria to seek their opinion on the skill takeoff of their respective employees in various fields.

Method of Data Analysis
Descriptive Statistics method of data analysis was applied to scale statements and examine the order of importance using pictorial representations. Also, inferential method of statistical analysis was also employed to checkmate the significant difference in TVET graduate's performance and sufficiency of acquired skills using Kruskal Wallis H-test approach. The quantitative research method implemented was able to properly analyze and give a clear picture of the study.

Results and Discussion
Reliability analysis made on scaled questions returned a Cronbach's Alpha statistic of 0.836 in Table 1, which indicates a high level of internal consistency for the scales used under study.

Table 1:   Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.836	.865	5

Source: Extracted from SPSS, Version 20.

Socio-demographic information of the participants can be evidenced from Table 2. Item 1 shows the gender distribution. Analysis indicates that majority of them were male which account for 62% of the total participants while the female employers constitute the minor, accounting for 38% of the total participants.
Age distribution of the participants can also be evidenced from item 2. Analysis shows that majority of them were of age 46 years above which account for 52% of the total participants, 28% were of age 36-45 years, while the minority representing 20% constitute age bracket between 26-35 years respectively.
Years of work experience of the employers can be depicted from item 3 of Table 2. Majority of them (48%) have more than 21 years of experience in their respective organization.

Table 2: Frequency and Percentage Distribution of Participants Socio-demographic Information

S/N	Items		Frequency	Percentage (%)
		Male	31	62
1	Gender	Female	19	38
		Total	**50**	**100**
		26-35 years	10	20
2	Age Distribution	36-45 years	14	28
		46 +	26	52
		Total	**50**	**100**
		5-10 years	2	4
		11-15 years	7	14
3	Years of Working Experience	16-20 years	17	24
		21 years +	24	48
		Total	**50**	**100**

Source: Field Survey, 2019

The Figure 2 below indicates the different types of TVET candidates' employers. Analysis indicates that construction and manufacturing firm have the highest participants (32%, 32%) followed by Information Technology companies (20%) and production companies (16%).
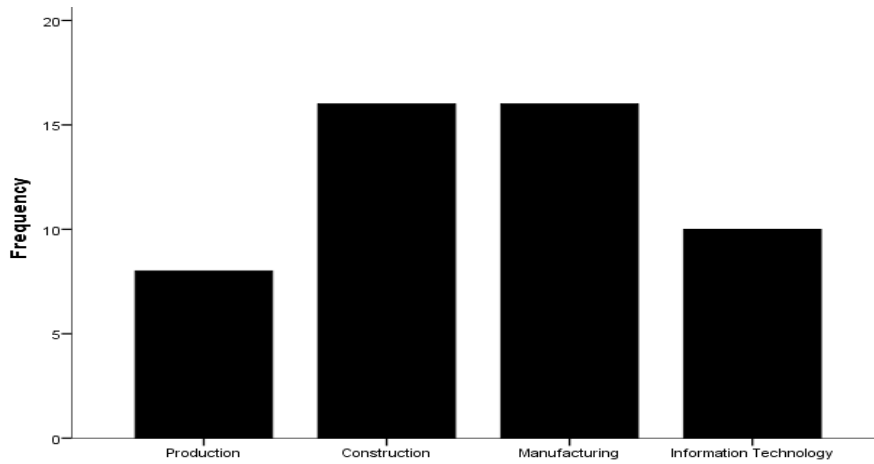

Fig. 2: Bar chart showing various Organizations of TVET graduates Employee

Figure 3, analysis showed that majority (60%) of the organizations' used for this study were established between twenty (20) to fifty (50) years ago, with 16% and 24% established below 20 years and above 50 years respectively.
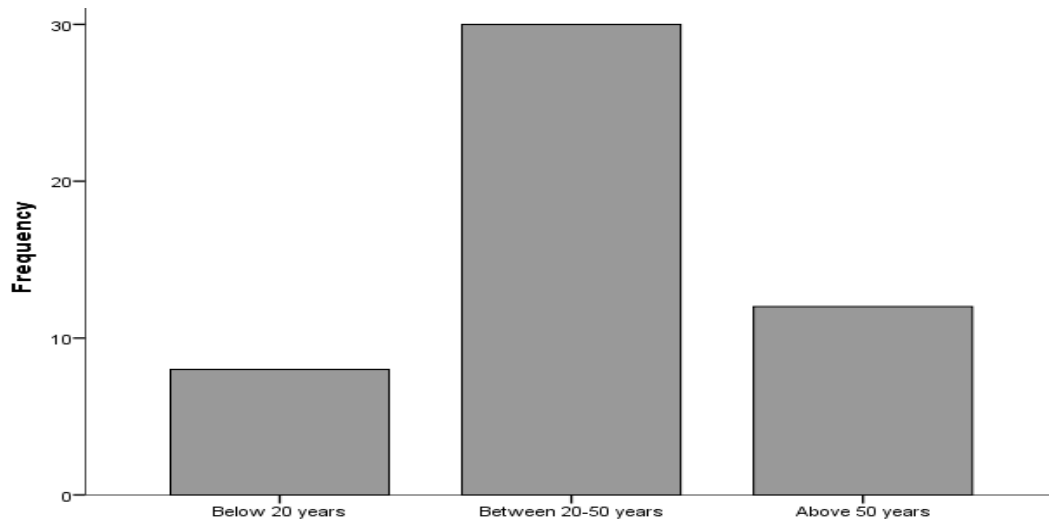

Fig. 3: Bar chart showing Frequency of Organization years of establishment

Figure 4 is the chart analysis that shows that majority (40%) of the participants agreed that they have 20%-50% TVET employees under working in their company, 30% of them have TVET employee below 20% while 24% have TVET employees above 50% working under their organization.
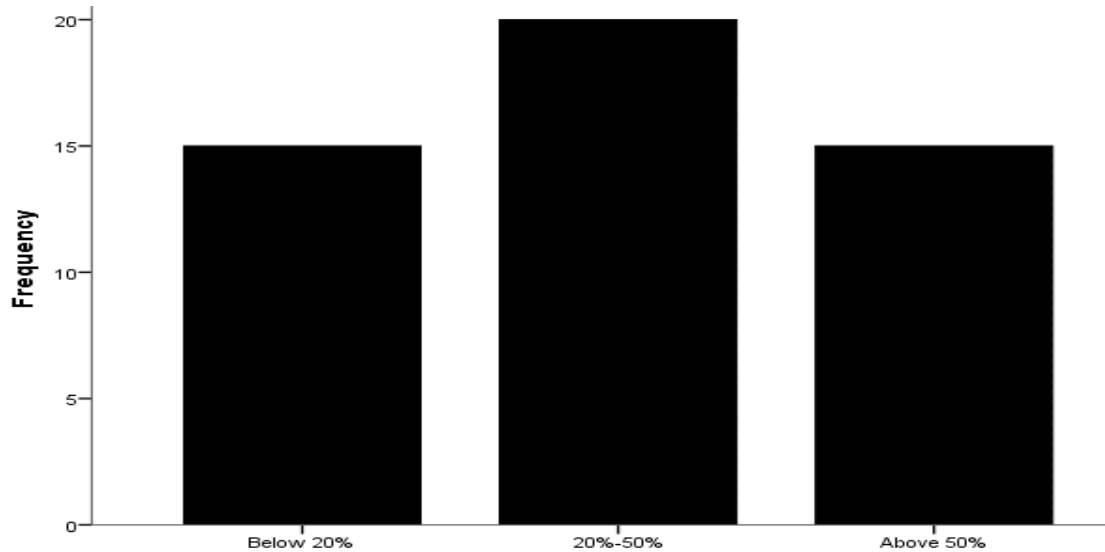
Fig. 4: Bar chart showing Frequency of Organization trend of TVET workforce compared to Non-TVET

The Table 3 below shows the distribution of participants response level to TVET and NON-TVET graduates in their various organizations with 20% of them having preference for TVET candidates, 22% of them have it for Non-TVET candidates while 58% of them have no preference for either of the two graduates.

Table 3: Frequency & Percentage Distribution of Participants preference for TVET and NON-TVET candidates in the Organization

Response	Frequency	Percent
TVET Candidates	10	20.0
Non-TVET Candidates	11	22.0
No Preference	29	58.0
Total	50	100.0

Source: Field Survey, 2019

Table 4 shows that majority of the participants, constituting 82% were of the opinion that many of the TVET graduates have insufficient skill takeoff in their career, 2% participants said they have no skill while 16% participants said that TVET graduates have sufficient skill takeoff in their respective career.

Table 4: Frequency & Percentage Distribution of Participants Ratings of TVET candidates Skill Takeoff

Response	Frequency	Percent
No skill	1	2.0
Insufficient	41	82.0
Sufficient	8	16.0
Total	50	100.0

Source: Field Survey, 2019

The weighted mean response of participants' on TVET graduates basic skill was analysed in table 5 as subjected to likert scale of 5. Weighted mean scores were computed and the upper and lower limit of the weighed mean score were 4.5-5.0 and < 1.5 respectively. Applying the decision rule, the participants could not decide if there are basic skills required for TVET graduates to work in their organization (WM = 3.34, Decision = U); there is no satisfaction in the skill take off of TVET workforce employed in their organization (WM = 2.42, Decision = D); There are problems with the curriculum used in the TVET program as average of the participants strongly disagree on the reversed question (WM = 1.43, Decision = SD); However, TVET curriculum can be revamped through collaboration with the industry (WM = 4.3, Decision = A); Collaboration with industry is likely to improve the skills required to have complete technically skilled workforce (WM = 4.3, Decision = A).

Soyemi J1 and Soyemi O.B;   Book of Proceedings of 4th National Development Conference of The School of Pure and Applied Science, The Federal Polytechnic Ilaro, Ogun State, 2nd – 5th December, 2019 430-436

Table 5: Weighted Mean Response of Participants' on TVET Graduates Basic skills

	SD	D	U	A	SA	WF	WM	Decision
There are basic skills required for TVET graduates to work in your Organization.	7	8	9	13	13	167	3.34	U
There is satisfaction in the skill takeoff of TVET workforce employed in your organization.	7	24	12	5	2	121	2.42	D
There is no problem with the curriculum used in TVET programme	14	20	6	7	3	72	1.43	SD
TVET curriculum can be revamped through collaboration with the industry.	0	0	6	23	21	215	4.3	A
Collaboration with industry like yours is likely to improve the skills required to have complete technically skilled workforce.	0	0	0	35	15	215	4.3	A

Source: Author's Computation

Results presented as number of participants. Sales Performance was assessed by giving 1 to SD, 2 to D, 3 to U, 4 to A, and 5 to SD. Reversed questions were coded otherwise.

Weighted Mean intervals and decision rules on Likert Scale
Strongly Agree (SA) = 4.5 - 5.0;   Agree (A) = 3.5 - 4.4;   Undecided (U) = 2.5 - 3.4
Disagree (D) = 1.5 - 2.4;   Strongly Disagree (SD) = <1.5
WF = Weighted Frequency;   WM = Weighted Mean

The significance of sufficiency of basic skills and performance of TVET graduates was tested using Kruskal Wallis H-test approach as shown in Table 6. Analysis showed that there is no significant difference in TVET graduates performance and sufficiency of acquired skill, $\chi^2(2) = 0.269, P-value\ 0.874 > \alpha = 0.05)$ with a mean rank of "no skill" of 27.11, "insufficient skill" of 14.76 and "sufficient skill" of 26.75.

Table 6: Kruskal Wallis Test of Significance by Ranks

	Performance	N	Mean Rank	Test Statistics
Sufficiency of Basic Skills	No skill	1	27.11	Chi-square = 1.269
	Insufficient	41	25.72 df. = 2	
	Sufficient	8	26.75	Asymp. Sig. = 0.874
	Total	50		

Source: Extracted from SPSS, Version 20.

Conclusion
The analysis from this study supports the fact that there is need to revamp TVET current curriculum being used in TVET educational institutions because it is insufficient to equip the products of TVET with the demands in the industry as there are missing links that needed to be filled up through industrial collaborations. The curriculum needs redesigning with contents enriched with practical from industrial experiences. The statistical analysis from the same study also supports the notion that graduates produced from TVET pogrammes are products of imbalance TVET curriculum. This study, therefore, concludes that, the Present TVET curriculum should be thoroughly revamped to incorporate necessary input from the Industry through industrial collaboration for technically skilled manpower to guaranteethe nations' economic growth and development. The output from this collaboration will also produceyouths that are empowered, self-reliant and employable.

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