

ENSURING SUSTAINABLE ECONOMIC DEVELOPMENT THROUGH CURRICULUM REFORMS IN TECHNICAL AND VOCATIONAL EDUCATION IN NIGERIA

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Abstract

The paper examined Technical and Vocational Education for sustainable development; it also highlighted economic factors justification for curriculum reforms in Technical and Vocational Education (TVE). The study used random samples 117 technical teachers and 200 technical students in all population of 119 teachers and 1000 technical students in all six public technical colleges in Kogi State. TVE curriculum reform with a KR-21 reliability index of 60 was used to collect the data. Two null hypotheses were tested at 05 alpha levels using the t-test statistics. Results showed that respondents were unanimous in their responses for the sustainable development of students, employers and the public needs were not satisfied with the TVE curriculum. Recommendations were made that, TVE curriculum should be reformed to incorporate the participation and support of industries; government, non-governmental organizations and the public, strategies such as workplace training, apprentice and intensive practical training should be incorporated.

Introduction

Concept of sustainability has been part of the discourse of international discussions since the 80s. According to Pavlova (2009), the term sustainable Development has various meanings and definitions, depending on different organizations. However, the concept of sustainable development according to

Pavlova, Development that meets the needs of the present without compromising the ability of the future generation to meet their own needs. Technical and Vocational Education and Training (TVET) is a key or “master key” to solving the sustainable development, peace and reducing poverty (Pavlova & Chunlin Huang, 2009). Mohamed Jallah (2004), was also of the opinion that TVET is pivotal as the “master key” to the sustainability development, mainly because TVET plays a very important role in Education for Sustainable Development.

The importance of Technical and Vocational Education (TVE) as education concerned with the preparation of skilled manpower cannot be over-emphasized. It is education intended to provide the recipients with technical knowledge, vocational skills and attitude necessary for the solution of problems in agriculture, industry, commerce and economic development through the application of science, technology and commerce at sub-professional level (FRN, 2014). Okoro, (2006) stated that, Technical and Vocational Education is the type of education that involve the acquisition of practical skills and basic scientific knowledge that will enable us to enter a particular occupation. Technical and Vocational Education (TVE) is education for work, self-reliance and job creation. The developed countries of Europe and America take issues of Technical and Vocational Education (TVE) more seriously by instituting some policies aimed at reforming the TVE curriculum. Obviously, the justification to this action is that the TVE curriculum must meet the changing needs of the world of work, the needs of the trainees, the needs of employers/labour market, the needs of the society (Alasa, 2008). The United Nations educational and scientific cooperation through its international project on Technical and Vocational Education (UNEVOC, 1993) strongly advocates close cooperation between Technical Vocational Education (TVE) institution and the world of work. In fact, UNESCO (1997) presented four studies on cooperation between technical and vocational education institutions and the world of work in Hungary, Romania, the Russian federation and Sweden.

These studies which capture curriculum reform efforts in those countries were predicated on some variable which are also relevant to Nigeria namely, change, economy, co-operation between technical and vocational educational institutions and enterprise teachers and TVE status. Necessary in order to solve the problems emanating from the variables above stated for sustainable development, these are all relevant in the TVE curriculum in Nigeria.

Curriculum and Change

The four case studies shown in UNESCO, (1997) reported a significant impact as a result of change in leadership, which led to decentralization of

responsibilities and decision making powers. This led to the educational system including TVE undergoing fundamental changes to meet the needs of stakeholders.

In Nigeria, even with its fledgling democracy, there has been a change in leadership leading to policies which also impact significantly on technical and vocational education. Therefore curriculum reforms in TVE should address the issues arising from change in all ramifications, including the public and private sector, policy, new technology and unemployment. For example, the TVE curriculum reforms need to take into consideration the implications of the policy change from the UPE to the universal basic education (UBE) – the 9-3-4 educational system. It will also have implications for the free and compulsory primary and secondary school education in Kogi State.

Curriculum Reform and the TVE Status:

It is true that the Technical and Vocational Education (TVE) has had a chequered history over time as many people thought that it is a programme for those who cannot make it academically. Some thought it is for those who needed to use their hands rather than their brains. This low status being ascribed to the TVE had translated to poor planning, poor funding and execution, leading to image and creditability problem and social misconception (Shirka, 2008). However, this position seems to be gradually changing in the face of however, massive unemployment and other economic and social challenges in the country which demand entrepreneurial skills to surmount them. This has led to suggestions and resolution at many TVE conference and seminar for the TVE curriculum should mandatorily include entrepreneurial development. That means many people who held the negative perception before have learnt by experience that the general education only cannot prepare a child to be self reliant, especially since there are little or no white collar' jobs now. They seem to have a rethink in favour of the technical and vocational education now, therefore the TVE curriculum must be reformed to make it serve the needs of many more students, depending on their interest and aptitude..

Statement of the Problem

The technical and vocational education in Nigeria is structured among others goals to “provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development” (FRN, 2014). The purpose was for securing gainful employment and being self reliant economically and for pursuing further education in secondary and tertiary institution. In spite of this provision the TVE is poorly planned and haphazardly administered. It is starved of funds and facilities. Instructional facilities are not

functional; they are obsolete, defective, and inadequate, even some case none existent in technical colleges according to Isaac and James (2008). The result is a programme with poor/inadequate input variables which inevitably translates to output/products which are ill-prepared consequently, the graduates of the programme cannot have employment, cannot establish their personal business and hardly can go for further studies. There is need therefore to assess the extent to which the TVE curriculum satisfies the needs and the extent to which co-operation between TVE institutions and private enterprise/industry, this lead to recommendations on TVE curriculum reforms.

Purpose of the Study

The study intends to assess the extent to which the TVE curriculum for sustainable development satisfies the needs of the students, employers and public.

Specifically the objectives are to assess the extent to which the TVE Curriculum:

- i) Satisfies the needs of students for employment, job creation and admission for further studies.
- ii) Satisfies the needs of employers/attract public private partnerships.

Research Questions

To what extent has the TVE Curriculum?

- i) Satisfied the needs of students
- ii) Satisfied the needs of employers/attract public private partnership?

Hypotheses

Ho₁: There is no significant difference in the mean responses of teachers and students on the extent to which the TVE Curriculum satisfies the needs of students.

Ho₂: There is no significant difference in the mean responses of teacher sand students on the extent to which the TVE Curriculum satisfies the needs of employers/public private partnerships.

Method

The study used a descriptive survey design; the population was 119 technical teachers and 1000 students in the Six Technical Colleges Kogi State. Random sample of 117 teachers and 2000 technical students were used for a study. The instrument for data collection was structured questionnaire, for curriculum reforms in technical and vocational education in Nigeria was validated and

used for gathering data for the study. The instrument sought for respondents' perception of the extent to which the TVE curriculum for sustainable development of students, employer and public and also enjoys the co-operation of the private sector. It was structured with 4-points response options of very great extent (VGE-4), great extent (GE-3) less extent (LE-2) and very less extent (VLE-1). The instrument's reliability was 73 obtained using the Kuder Richardson (KR-21) method after administering the instruments on 30 respondents who did not take part in the actual study. The descriptive statistics (mean) was used to answer research questions while the t-test was used to test the hypotheses at .05 level of significance.

Results

The research question 1; to what extent has the TVE curriculum satisfied the needs of students were answered using table 1.

Table 1: Teachers and students mean rating on students' needs satisfaction with TVE

N = 423	VGE	GE	LE	VLE	X	X-	
To what extent has the TVE curriculum satisfied the needs of students in terms of:	4	3	2	1			Decision
Having a balanced development in the three domains of learning (cognitive psycho motive and affective)	95	65	200	63	1038	2.45	NS
Acquiring skills for employment	72	76	170	105	961	2.27	NS
Having the qualification to go for further for studies	85	74	186	76	1018	2.40	NS
Acquiring coping skills for problem daily problem solving	81	96	190	56	4048	2.47	NS
Acquiring entrepreneurial skills for job creation/self reliance	102	195	74	52	1193	2.82	S
Total	437	506	820	352	5258	2.48	

Very Satisfied =4 Satisfied =3 Rarely Satisfied =2 Not Satisfied =1

Table 1: showed that student' needs are not being satisfied with the TVE with a total mean 2.48. The student needs considered were skills for employment (X = 2.27), acquiring entrepreneurial skills for job creation (X = 2.82). Acquiring coping skills for problem solving = 2.47), having a balanced development in the three domains of learning (X = 2.45) and having the qualification to go for further studies (X = 2.40).

Research question 2, to what extent has the TVE curriculum satisfied the needs employers/attracts public, private partnership?

Table 2: Teachers and students mean rating on employers', needs satisfaction on the TVE public/private partnership

N = 423

	VGE	GE	LE	VLE	X	X-	
	4	3	2	1			
To what extent has TVE satisfied the needs of employers/partnerships in terms of:							
Contributing to the curriculum content	20	33	49	321	598	1.41	Decision NS
Provision of tools/machines	10	15	102	296	585	1.38	NS
Employing the graduates of TVE	78	91	103	151	942	2.22	NS
Setting standards that students in TVE should meet	15	28	85	295	609	1.43	NS
Provision of financial support	2	10	60	351	509	1.20	NS
Total	125	177	399	1414	3242	1.52	

Very Satisfied =4 Satisfied =3 Rarely Satisfied =2 Not Satisfied =1

Table 2 showed a total mean of 1.52; when compared with a cut-off mean of 2.5; it means that employers and the public are not satisfied with the TVE. Therefore, they are not contributing to the development of the programme. Aspects of partnership considered were contribution to the curriculum content development (X = 1.41), provision of hand tools and machines (X = 2.22), setting of standards that students should meet (X = 1.43) and provision of financial support (X = 1.20).

Testing Hypotheses

Ho₁: There is no significant difference in the mean responses of teachers and students on the extent of student' needs satisfaction with the TVE.

Table 3: t-test of mean difference on students' needs satisfaction with the TVE

Respondents	N	\bar{X}	SD	df	t-cal	t-cri
Teachers	117	12.21	2.40	421	-1.16	1.96
Students	200	12.53	2.75			

P < .05 = significant: Analysis on table 4 showed a significant tcal of 19.67, leading to the rejection of HO

Finding

1. The study showed that the TVE curriculum does not satisfy the needs of stakeholders (students, employers and the public)
2. There is no significant difference between teachers and students responses on student's needs satisfaction with the TVE.
3. There is a significant difference between teachers and students responses on employers' needs satisfaction/public partnership.

Discussion of Findings

This study has indicated that students' needs are not satisfied with the TVE, with a mean of 2.4 especially their needs for employment, job creation, qualification for admission for further studies and coping skills for the solution of daily problems. It has also indicated that the TVE curriculum does not satisfy the needs of employers the public with a means of 1.51. This does not portend well for the TVE curriculum implementation because it has led to poorly administered programme and ill-prepared graduates who cannot benefit from the TVE curriculum by securing employment or being self reliant. A good TVE curriculum must satisfy the needs of students in terms of employment, self-reliance and sustainable living. It must satisfy the needs of employers by providing the caliber of workers which employers need to fill their job position, and the needs of the public by providing skilled manpower for employment, which will lead to improved socio-economic development of the nation. According to UNEVOC (1993), experts agree that effectiveness of a training system depends on a well-developed curriculum, measured by the extent to which: (1) it is able to attract the young generation into the occupation of the future and skills which the employers need; (2) it is able to deliver not only technical content (technical skills) but help students to learn how to cope with new challenges (copping skills) and prepare them for life long learning. The TVE is a capital intensive programme, which requires the contribution and co-operation of the government.

There must be in place effective public private partnership initiated aimed at provide assistance to stimulate the TVE programme either individually or as a group. This can be done through financial contribution, contribution to the curriculum content, provision of tools and equipment other facilities which will aid in effective skill development. Meanwhile, since their needs have not been satisfied, industries/employers, donor agencies and the public do not partner with government to provide the resources for the TVE. The situation has led to a very

deplorable situation of lack of hand tools, machines and materials since government alone cannot provide them in the midst of other compelling demands.

The TVE curriculum reforms must fully satisfy the graduate's needs to work and earn living either through employment or self-reliance. The reforms must ensure massive exposure of students to practical experiences, including workplace training (SIWES) apprentice period and provided for acquisition of hand tools, machines, materials and effective training of technical teachers. It must enlist the co-operation of industries, experts, donor agencies and the public to provide resources for implementation of the TVE. Such co-operation will ensure amore acceptable and creditable TVE programme for sustainable development.

Conclusion

The economic aspects of Sustainable Development can be achieved to improve the quality of life for people of this country. In order words, the TVE play an important role in the economic development of the nation and consequently, will contribute to a good society with high income. There is need to refocus the TVE curriculum for effective skill training and learning experiences to meet the standards required by employers, satisfy the needs of students, employers and the public. Relevant tools, machines and materials must be provided and utilized by qualified teachers to deliver the programme. The TVE curriculum needs to be reformed to capture a wide range of partnerships; including government, industry experts, and members of the public, donor agencies and non-governmental organization. It needs to provide intensive practical experiences through workplace training, apprentice and in school practical training. The TVE presently does not satisfy the need for sustainable economic development.

Recommendations:

The following recommendations are proffered:

- * There should be an evaluation plan: This plan should provide a general description of the process for evaluating the implementation process. The processes should include: Provision of workshops and laboratories and other equipment. These should be provided at all levels of technical and vocational education curriculum to enable the individuals to acquire the needed skills that will make them to be gainfully employed and empower them economically.

- * There should be proper budgeting and adequate funding. The planning should provide a budget that includes sufficient funding to provide release time for teachers to implement. The budget should describe all sources of funding ranging from government to special grants or donation from individuals and companies.
- * Provision of specified equipment. Equipment that does not fit with the curriculum of technical and vocational education should not be acquired or accepted when brought to an institution probably based on self satisfaction rather than the system, this should not be allowed, as they will hinder effective implementation of Technical and Vocational Education Curriculum and hence attainment of MDGs. Our experience of the basic technology equipment should be fresh and real as a guide.
- * There is need to reform the TVE curriculum to incorporate the active participation and support of industries, government, non-governmental organizations and members of the public.
- * Strategies such as workplace training, apprentice period and intensive in – school practical experiences should be well articulated in the curriculum.
- * Community-based workshops must be taken advantage of in order to improve their practical skills this must be incorporated in the curriculum.
- * The industrial attachment should be taken more seriously and both students and their supervisors should be paid allowances, so that they will be more serious with it.

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