

# Constraints to Effective Implementation of Technical and Vocational Education Curriculum in Technical Colleges in Nigeria

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## ABSTRACT

*This study examined the constraints to effective implementation of technical and vocational education (TVE) curriculum in Technical colleges in Niger State and Federal Capital Territory, Abuja. A descriptive survey design and structured questionnaire were adopted to gather data for the study, 194 technical and vocational teachers constituted the sample for the study. Two research questions were posed and answer. Two hypotheses were also tested at 0.05 level of significance using t-test statistical tool. The findings of the study revealed lacks of instructional materials; tools and equipment; electricity to operate equipment, poor attitude of government, parents, school administrator, students and the society towards TVE affect the implementation of TVE curriculum. The study further revealed that there was no significant difference between the responses of male and female teachers on the constraints to effective implementation of TVE curriculum in Nigerian technical colleges. Based on the finding, it was recommended, among others, that the federal government should make it a point of duty to build standard and functional workshops that are equipped with facilities in all technical colleges; students should be encouraged to have interest; NGOs should be encouraged to support TVE in Nigeria and teachers should be well remunerated and adequate enlightenment campaigns should be carried out in society on the importance of TVE.*

**Keywords:** Constraints, Curriculum, Curriculum Implementation and Technical and Vocational Education.

## 1. INTRODUCTION

Curriculum can be defined as a structured series of intended learning experiences through which educational institutions endeavor to realize the hopes of the society (Onwuka, 1981). According to Tanner and Tanner, 1995, curriculum is a “plan or program of all experiences which the learner encounters under the direction of a school”. Curriculum entails all the experiences that a learner is exposed to during the course of learning while in school. Curriculum, a working tool that gives a sense of direction on what to do and how to do it for the purpose of realizing educational goals. Curriculum usually capture appropriate content(s) in order to facilitate the realization of the needs of the society through teaching and learning process as reflected in objectives. Societal needs are never the same from one generation to another; therefore, an efficient curriculum is inevitably susceptible to desirable changes from time to time in order to be functional in the training of skilled labour to carter for the diverse needs of the people. The content of the curriculum are implemented through teaching and learning process.

Curriculum implementation entails putting into practice the officially prescribed courses of study, syllabuses and subjects. Curriculum implementation therefore refers to how a planned or officially designed course of study is translated by the teacher into syllabuses, schemes of work and lessons to be delivered to students. The process involves helping the learner acquire knowledge or experience. It is important to note that curriculum implementation cannot take place without the learner. The learner is therefore the central figure in the curriculum implementation process. Implementation takes place as the learner acquires the planned or intended experiences, knowledge, skills, ideas and attitudes that are aimed at enabling the learner to function effectively in the society. The classroom is the centre for curriculum implementation. Behavioural changes are expected from a learner after undergoing curriculum implementation. The success or failure of any curriculum implementation depends much on what goes on in the classroom and the extent to which teaching/learning process is carried out according to plans as specified in the curriculum. It is the delivery stage in the curriculum process. Curriculum implementation occupies a strategic position as it link the design with evaluation stages in curriculum implementation, that is, the materials and methods are put together to produce desirable learning outcomes and experiences for the learners.

Offorma (1994) suggested that a developed curriculum has to be reviewed on a regular basis even after implementation to ensure that what is presented to learners can actually help them to be useful to themselves and to the society. Besides, it is necessary that a curriculum is reviewed after the initial planning before implementation. The review of a pre-planned curriculum according to Offorma (1994) should aim at achieving the following:-

- 1) Ensure that the selected educational objective represent priority areas in the needs of the society.
- 2) Examine the selected content and learning experiences with a view to finding out whether they can effectively lead to the achievement of the educational objectives. The content and learning experience should also be reviewed in line with the current theories of human development and learning. The prevailing condition in the education system should be considered during the review. These include the availability of teachers and resource materials for effective presentation of the content to learners.
- 3) Examine the nature of organization of the content and the learning experiences to ensure appropriate sequence and scope.
- 4) Consider the appropriateness of the suggested teaching method.
- 5) Find out whether the suggested evaluation procedure is appropriate for the selected objectives and content.

The major implementers of the curriculum are the classroom teacher. The classroom teacher set up learning opportunities aimed at enabling learners acquires the desired knowledge, skills and values. Though the teacher occupies a central position in curriculum implementation, learners should also be actively involved in the process. After all, it is through learners' activities that learning take place. The teacher's duty is to bring learners in a face-to-face encounter with learning activities. Therefore, TVE teachers have a vital role to play in the implementation of TVE curriculum. This is particularly important because teaching TVE require the manipulation of physical material to produce the desirable change in TVE.

Technical and Vocational Education (TVE) has been an integral part of national development strategies in many societies because of its impact on productivity and economic development. The National Policy on Education (2004) defined TVE as that aspect of education which leads to the acquisition of practical and applied skills as well as basic scientific knowledge (FRN, 2004). The TVE inception into the formal school curriculum accelerated youth empowerment. The production of empowered youth should be paramount because they are equipped with vocational and technical skills to be self-reliant. Youth are the engine house of any nation; when the youths are adequately empowered, the nation is empowered as well (Oviawe, 2009). TVE helps in the acquisition of practical skills needed for self-reliance and national development. The aim of TVE is to make people to be creative and productive for a better living. The beneficiaries of TVE have the comparative advantage of being employable and employers of labour. Despite its contributions, it was observed that TVE has not been given the attention it deserves, that is one of the reasons for the poor implementation of TVE curriculum in technical colleges.

Offorma (1994) argued that success of any curriculum is not predicated solely on the design alone but on the implementation. Therefore, the success of TVE curriculum depends on available resources such as personnel, instructional material, teaching method, and infrastructural facilities for its effective implementation. Akudolu (1994) explained further that despite the effort of Federal Government in ensuring a well implemented curriculum in our institutions, the implementation is fraught with a lot of issues ranging from curriculum overload, large class population, dearth of institutional materials, failure factors, examination malpractice, learner related issues, evaluation of learning among others. These and many other issues might be responsible for failure of the curriculum.

The consequence of poorly implemented curriculum of TVE in the technical colleges is that students might be unable to acquire the necessary saleable skills (Doolittle and Camp, 2000). The resulting effects could also be poor performance of technical and vocational students in public examinations (Aina 2000) and the work-place when employed on graduation (NABTEB, 2002; Paris, 1998 and Shield, 1996). The failure of teaching/learning strategies in the technical colleges to prepare students to face the challenges in the world of work is evidence in the number of students found in the street without job after graduation because their training is inadequate for social needs of the society (Olaitan, 1996).

For Nigeria to excel technologically there is the need for the effective implementation of TVE curriculum in technical colleges. This is a result of importance of technical and vocational education to the development of both individuals and the society at large. The frequent occurrence of low students' participation and performance in technical and vocational courses has been a great concern to all-well-meaning individuals, institutions and industries. Therefore, it is desirable that curriculum implementation at technical college must be right to avoid the menace of graduates roaming the street in search of white collar job.

## **2. PURPOSE OF THE STUDY**

The purposes of this research were to:

1. Identify the material resources related factors that affect effective implementation of TVE curriculum in Nigerian technical colleges and to;

2. Identify the human resources related factors that might inhibit the effective implementation of TVE curriculum in Nigerian technical colleges.

### 3. RESEARCH QUESTIONS

The following research questions were posed to guide the study:

1. What are the material resource related factors that affect effective implementation of TVE curriculum in Nigerian technical colleges?
2. What are the human resources related factors that might inhibit the effective implementation of TVE curriculum in Nigerian technical colleges?

### 4. METHODOLOGY

The study adopted a survey design. The population for the study comprises of 3154 TVE teachers in Science and Technical Colleges in Niger State and Federal Capital (FCT), Abuja. The sample for the study consists of 194 (121 male and 73 female) TVE teachers in four randomly selected technical colleges in Niger State and FCT. Structured questionnaire containing 38 items was used in gathering data from the TVE teachers for the study. The questionnaire consists of three sections. The questionnaire items were rated strongly agree - 4 points, agree - 3 points, disagree - 2 points and strongly disagree - 1 point. The instrument for this study was subjected to face validity by three research experts from Department of Vocational Teacher Education, University of Nigeria Nsukka. The reliability of instrument was established by trial testing and reliability coefficient was determined using Cronbach Alpha formula. The reliability coefficient is 0.83. The data collected for the study were analysed using arithmetic mean to answer all the research questions while the hypotheses were tested using t-test at 0.05 level of significance.

### 5. RESULTS

The results of the data analysis are presented below in accordance with the research questions and hypotheses.

#### Research Question 1

What are the material resources related factors that affect effective implementation of TVE curriculum in Nigerian technical colleges?

**Table 1: Mean ratings and Standard Deviation of TVE teachers on the material resources related factors that affect the implementation of TVE curriculum in Nigerian technical colleges.**

S/n	Material resources factors	$\bar{X}_1$	$SD_1$	$\bar{X}_2$	$SD_2$	$\bar{X}_A$	$SD_t$	Decision
1	Non availability of functional workshops has no effect on the teaching and learning of Technical and vocational courses in technical colleges.	1.55	0.77	1.58	0.81	1.55	0.79	Disagreed
2	TVE program in technical colleges is not properly funded by the government.	3.52	0.81	3.56	0.72	3.54	0.77	Agreed
3	Lack of textbooks and other instructional materials make the implementation of TVE curriculum to be difficult.	3.00	0.58	2.82	0.61	2.91	0.60	Agreed

4	Lack of tools and equipment make the implementation of TVE curriculum difficult.	3.15	1.01	2.85	0.98	3.00	1.00	Agreed
5	Some workshops have no electricity to operate the equipment.	3.43	0.48	3.83	0.55	3.63	0.52	Agreed
6	The available equipment supplied to the school is outdated	2.95	0.71	3.13	0.64	3.04	0.68	Agreed
7	Lack of basic knowledge in ICT affects the teaching of the trade module	2.96	0.66	2.99	0.72	2.97	0.69	Agreed
8	High difficulty level of the textbooks introduced in the new curriculum affects the implementation of the curriculum	2.85	0.73	2.85	0.61	2.85	0.67	Agreed
9	Over- growing class size affects the implementation of the new curriculum	2.21	1.12	2.47	0.85	2.34	0.99	Disagreed
10	A busy school time-table affects the implementation of the new curriculum.	2.35	0.64	2.11	0.93	2.23	0.77	Disagreed
11	Increasing variety of subject matter contents affects the implementation of the new curriculum.	2.34	0.86	1.74	0.56	2.08	0.71	Disagreed
<b>Grand <math>\bar{X}</math> and SD</b>		<b>2.79</b>	<b>0.75</b>	<b>2.82</b>	<b>0.74</b>	<b>2.81</b>	<b>0.75</b>	<b>Agreed</b>

Key

$\bar{X}_1$  = Mean of Male Teachers;  $\bar{X}_2$  = Mean of Female Teachers;  $\bar{X}_A$  = Average mean of the Teachers;  $SD_1$  = Standard Deviation of Male Teachers;  $SD_2$  = Standard Deviation of Female Teachers;  $SD_A$  = Average Standard Deviation of the Teachers

Number of Male teachers ( $N_1$ ) = 121; Number of Female teachers ( $N_2$ ) = 73

In the Table 1 the respondents' decision brought to the limelight some of the material resources factors that are affecting the implementation of TVE curriculum in Nigerian technical colleges. Results presented in Table 1 revealed that 8 out of 11 items had their mean values ranged from 2.85 to 3.63. This showed that the means were above the cut-off point of 2.50 indicating that the respondents agreed that those items are material resources related factors that affect effective implementation of TVE in technical colleges. However, four of the 16 items (no 1, 10 and 11) had the mean values of 1.55, 2.23 and 2.08 respectively which are below the cut-off point of 2.50. This showed that the respondents disagreed on those items as material resources related factors that affect effective implementation of TVE curriculum in technical colleges.

## Research Question 2

What are the human resources related factors that affect the implementation of TVE curriculum in Nigerian technical colleges?

**Table 2: Mean ratings and Standard Deviation of TVE teachers on the human resources related factors that affect the implementation of TVE curriculum in Nigerian technical colleges**

S/n	Human resources factors	$\bar{X}_1$	$SD_1$	$\bar{X}_2$	$SD_2$	$\bar{X}_t$	$SD_t$	Decision
1	There is lack of co-operation from parents	3.80	0.67	3.70	0.69	3.75	0.68	Agreed
2	Parents cannot afford to buy necessary books for the course you would have preferred.	3.22	0.72	3.18	0.78	3.20	0.75	Agreed
3	Lack of professional and experienced Teachers	3.33	0.65	3.57	0.77	3.40	0.71	Agreed
4	Provision of enough allowances to the teacher	2.11	0.74	2.19	0.81	2.15	0.78	Disagreed
5	Lack of in service training and poor condition of service affect the efficiency of the teachers	3.28	0.91	3.26	0.75	3.22	0.83	Agreed

6	Lack of cordial relationship between teachers and students	2.36	0.76	2.34	0.77	2.35	0.77	Disagreed
7	Students are not aware of the importance of TVE	2.96	0.68	3.04	0.81	3.00	0.75	Agreed
8	Students are always afraid of practical work and calculation	2.30	0.65	2.24	0.69	2.27	0.67	Disagreed
9	The methods used in teaching TVE courses in technical colleges make its curriculum implementation difficult.	2.14	0.73	1.42	0.72	1.78	0.73	Disagreed
10	Poor attitude of the students toward TVE affects the implementation of its curriculum in technical colleges.	3.61	0.82	3.29	0.87	3.45	0.85	Agreed
11	Parents do not encourage their children offer TVE trades in technical colleges.	3.07	0.81	3.05	0.89	3.06	0.85	Agreed
12	Poor communication skills and understanding of some basic concept by the students in the new curriculum affect the implementation.	3.41	0.91	3.56	0.88	3.47	0.90	Agreed
13	Poor attitude of government, school administrator and the society toward TVE affects the implementation.	3.50	0.61	3.51	0.72	3.51	0.67	Agreed
14	TVE program lack support from government	3.43	0.71	3.05	0.64	3.24	0.68	Agreed
15	Most of the Non-governmental organizations (NGOs) are not encourage by the government to support TVE in Nigeria	3.20	0.66	3.32	0.61	3.26	0.68	Agreed
16	Unstable government policy on vocational and technical education affects the implementation of the new curriculum	3.76	0.85	3.00	0.87	3.38	0.86	Agreed
<b>Grand <math>\bar{X}</math> and SD</b>		<b>3.13</b>	<b>0.74</b>	<b>2.95</b>	<b>0.72</b>	<b>3.03</b>	<b>0.76</b>	<b>Agreed</b>

Key

$\bar{X}_1$  = Mean of Male Teachers;  $\bar{X}_2$  = Mean of Female Teachers;  $\bar{X}_A$  = Average mean of the Teachers;  $SD_1$  = Standard Deviation of Male Teachers;  $SD_2$  = Standard Deviation of Female Teachers;  $SD_A$  = Average Standard Deviation of the Teachers

Number of Male teachers ( $N_1$ ) = 121; Number of Female teachers ( $N_2$ ) = 73

Results presented in Table 2 revealed that 12 out of 16 items had their mean values ranged from 3.00 to 3.75. This showed that their means were above the cut-off point of 2.50 indicating that the respondents agreed that those items are human factors affecting effective implementation of TVE in technical colleges. However, five of the 15 items (no 4, 6, 8 and 9) had the mean values of 2.15, 2.35, 2.27 and 1.78 respectively which are below the cut-off point of 2.50. This showed that the respondents disagreed on those items as human resources related factors affecting effective implementation of TVE in technical colleges.

**Table 3: t-test analysis on the mean responses of male and female TVE teachers on the material resources related factors that affect effective implementation of TVE Curriculum in technical colleges**

Group	N	$\bar{X}$	SD	DF	t-cal	t-critical	P < 0.5
Male	121	2.79	0.75	92	0.1885	1.98	Not significant
Female	73	2.82	0.74				

Key: N= number of the respondents

$\bar{X}$  = mean of the respondents

SD = standard deviation of the respondents

DF = degree of freedom



Table 4 showed that the t-calculated is 0.1885 as against t-critical which is 1.96. Therefore, the null hypothesis of no significant difference is accepted. Hence there was no statistically significant difference between the responses of male and female teachers on the material resources related factors that affect effective implementation of TVE Curriculum in technical colleges.

**Table 4: t-test analysis on the mean responses of male and female TVE teachers on the human resources related factors that affect effective implementation of TVE Curriculum in technical colleges.**

Group	N	$\bar{X}$	SD	DF	t-cal	t-critical	P < 0.5
Male	121	3.13	0.74	92	0.1189	1.98	Not significant
Female	73	2.95	0.72				

Key: N= number of the respondents

$\bar{X}$  = mean of the respondents

SD = standard deviation of the respondents

DF = degree of freedom

Table 4 showed that the t-calculated is 0.349 as against t-critical which is 1.96. Therefore, the null hypothesis of no significant difference is accepted. Hence there was no statistically significant difference between the responses of male and female teachers on the human resources related factors that affects the implementation of TVE curriculum in Nigerian technical colleges

## 6. DISCUSSION

The analysis of data in Table 1 suggests that many factors such as lacks of instructional materials, lack of tools and equipment lack of electricity to operate equipment, poor attitude of government, parents, school administrator, students and the society towards TVE affects the implementation of TVE curriculum in technical colleges. This findings is in line with the findings of Bandele & Faremi (2012) who carried out an investigation into the challenges facing the implementation of Technical College curriculum in South West, Nigeria and discovered that some of the challenges facing technical education includes inadequate resources, outdated equipment, lack of standard workshop for practical work to complement the theoretical aspect of the new modules and among others. Oviawe, (2009) pointed out that other factors such as lack of in-service training and poor condition of service of teachers, and instructors, unstable government policy; lack of standard workshop for practical work and lack of related modern instructional materials also affect the implementation of the curriculum. Suleiman (2009) also stressed that poor attitude of policy-maker (government in power, administrators, ministry of education officials etc) is one of the challenges facing the implementation of any school programme. Puyate (2004) argued that no effective vocational training can take place without the adequate provision of learning facilities and instructional materials. Most of the equipment, tools, and workshop facilities are either broken down or damaged or dilapidated, are not replaced neither renovated (Puyate, 2006). According to Olaitain (2007), teachers who are the major operators of educational systems or programs, are expected to effect and impart the needed knowledge to the trainees. This can only be effective if the teachers are in their right frame of mind. This needs stimulus such as providing them with the needed remuneration, incentives, allowances, promotion and so on.

The findings in table 2 revealed that some of the human resources related factors that serve as constraints to effective implementation of VTE curriculum includes lack of co-operation from parents, inability of the parents to afford necessary books for the course you would have preferred, lack of professional and experienced teachers, teachers are provided with enough allowances, lack of cordial relationship between

teachers and students. This finding is also in consonance with the findings of Bandele & Faremi (2012) who found out that poor communication skills and understanding of some basic concept by the students in the curriculum, lack of in service training and poor condition of service of teachers and lack of basic knowledge in ICT are challenges facing curriculum implementation in technical college. The process of provision and implementation of any national education program lies on the shoulders of the government and the entire society at large. The Nigeria nation is rich, but has no clear plan or program for education in general, and TVE in particular (Puyate, 2008). Thus, for the education programs to be implemented effectively, the government must assumed responsibility. The findings on the hypotheses revealed that there was no significant difference between the responses of male and female teachers on the human and material resources related factors that serve as constraints to effective implementation of TVE Curriculum in technical colleges.

## **7. CONCLUSION**

In this study, effort was made to examine some of the constraints to effective implementation of TVE curriculum in technical college in Niger State. From the findings of the study the researcher concludes that there are lots of constraints to effective implementation of TVE curriculum in technical college in Niger State, planning of adequate and suitable TVE curriculum should not be for the sake of formality, but should be implemented effectively. The necessary facilities and equipment should be provided for effective implementation of TVE curriculum. Those subjects which are practically oriented should be accorded appropriate recognition, which they deserve in the realm of educational activities. Students in particular, should be enlightened on the importance and advantages of TVE as a way of reducing the present high unemployment prevailing in the country.

## **8. RECOMMENDATIONS**

Based on some of these findings, the following recommendations are made.

1. The Federal Government should make it a point of duty to build standard and functional workshops that are equipped with facilities in all technical colleges. This will make teaching and learning of TVE curriculum to be meaningful as the students will have opportunity to be engaging in practical work which is one of the objectives of the TVE curriculum
2. Instructional and textual materials should be provided and their usages be made compulsory in technical colleges. This will create interest in the students and make learning pleasurable and permanent.
3. The technical and vocational teachers training should be restructured in such a way that will make it professional. This will enhance teacher's competency in their teaching subject theoretically and practically and also give quality instruction to students. Government should encourage experts in TVE education to organize training programmes on the objective of the curriculum in form of workshops and seminars for teachers from time to time.
4. The NGOs should support TVE in Nigeria.
5. Teachers should be well remunerated. Their salaries should be increased, and be paid on time;
6. There should be a cordial relationship between teachers and students;
7. Adequate enlightenment campaigns should be carried out in society generally about the importance of TVE.



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