NEW DIRECTIONS TO QUALITY TECHNICAL AND VOCATIONAL EDUCATION IN NIGERIA: PERCEPTION OF TECHNICAL AND VOCATIONAL TEACHERS

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ABSTRACT

A number of initiatives have been undertaken to develop Technical and Vocational Education (TVE) in Nigeria. It has, however, been observed that more effort is needed to improve it for effectiveness. Based on these observations, this study sought to identify methods for reforming and repositioning TVE for optimum performance in Nigeria. A preliminary semi-structured interview with enough guide questions relating to administration, policy, facilities and skills acquisition provided the material for the survey that formed the major part of this study. Four research questions and one hypothesis guided the survey study. The design of the study was an ex-post facto survey with a study sample of 578 teachers randomly drawn from 21 out of 36 States in Nigeria. The findings showed that the respondents realised the need to reposition Technical and Vocational Education with special reference to new policy formulations, administrative practices, facilities and curriculum review. The perceptions of male and female teachers were the same and these include the use of competent teachers as well as adequate workshops and laboratories.

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INTRODUCTION:

UNESCO (1996) defined technical and vocational education as 'all forms and levels of the education process involving, in addition to general knowledge, the study of technologies and related sciences and the acquisition of practical skills, know-how, attitudes and understanding relating to occupations in the various sectors of economic and social life'. Technical and Vocational Education institutions train for specific skills in Carpentry, Electrical installation, Painting, Welding, Garment making, Catering, Cosmetology, Data Processing, Business Studies etc.

Historically, a number of policies have been formulated to encourage the development of TVE in Nigeria. For example, the Phelps-Stokes report of 1922 called for industrial and technical schools where training would be given in industrial activities that would lead to improvement in human services (Lewis, 1962). In 1944, the Government embarked on a 10 year Technical Education Development Plan (TED) under the Colonial Development and Welfare Act of 1940. The Ashby report of 1960 made strong recommendations for the development of commercial and technical education.

Since independence more efforts have been made. During the first National Development Plan (1962-68), Technical and Trade schools were established. A National Technical Teacher Training College was established and facilities for teaching the subjects were provided. In the second national development plan period (1970-74), efforts were made to improve TVE by the expansion of the existing Technical and Trade schools and establishment of new ones (Federal Republic of Nigeria, 1970). The third plan (1975-1980) was a follow-up to the second national plan. The fourth national development plan (1981-85) dealt with implementing the provisions of the National Policy on Education. The policy involves a shift in emphasis towards pre-vocational and

vocational training. In spite of the efforts made, however, TVE in Nigeria still remains in trouble. The problems include insufficient funding, lack of well equipped workshops and laboratories, dearth of reading materials, irregular professional development programmes for teachers, lack of opportunities for industrial training for staff and limited opportunities for students.

The purpose of this study, therefore, was to determine how to reform and implement Technical and Vocational education for optimum performance in Nigeria.

METHODOLOGY:

Population and Sample

The population for this study consisted of all the Technical and Vocational Teachers employed full time in the public secondary and tertiary institutions. The sample contains 948 teachers in Vocational and Technical Education randomly drawn from 21 out of 36 States in Nigeria. This sample represented approximately 24% of all Technical and Vocational teachers in each of the States selected. The 578 individuals who returned completed questionnaires represented a 61% response rate for the sample.

Instrument

A preliminary study of the problem of the study was conducted using a semi-structured interview questions relating to administration, policy, facilities and skills acquisition in TVE. Twenty Technical and Vocational educators in secondary and tertiary institutions were interviewed in their offices. Common themes in their responses were refined and categorized under major headings, namely: (1) Policy formulation, (2) Administration, (3) Facilities and (4) Skills acquisition.

Aspects of TVE that needed improvement:

Sector	Frequency	Frequency (%)
Administration	4	20.0
Policy	1	5.0
Facilities	6	30.0
Skills Acquisition	9	45.0
	20	100%

Almost half of the vocational educators perceived that the main problem of TVE is on skill acquisition. A third of the respondents commented that inadequate facilities in vocational education were a disadvantage. Four of the vocational educators pointed to poor administration/implementation strategies (20%). One of the vocational educators referred to lack of appropriate policy to guide the programme. It was clear from the discussions that the TVE programme is not effective. This was seen as a problem. It was, therefore, necessary to obtain responses from the TVE teachers so as to establish what can be done to improve TVE in Nigeria.

A survey instrument was subsequently developed for reforming Technical and Vocational Education in Nigeria. In order to achieve this, these researchers had to:

(1) Review relevant literature as well as rely on the interview results as a means of generating survey questions;
(2) Present the list generated to a competent jury of professional technical and vocational educators for validation; and
(3) Refine the list in terms of the experts' recommendations and agreements.

The instrument contained two sections. The first part asked for personal information such as sex, area of specialization in Technical/Vocational field, years of teaching experience and qualifications. The second part contained statements on methods for reforming technical and vocational education. The respondents were asked to classify each item on a Likert type 5-point scale as follows:

(1) Strongly Agree - (SA)
(2) Agree - (A)

(3) Undecided - (U)
(4) Disagree - (D) and
(5) Strongly disagree - (SD)

The reliability of the instrument was established by the test-retest procedure whereby it was administered to the same subjects twice with a time lag of three weeks. Correlation analysis using Rank difference correlation ratio yielded a coefficient of 0.86. This indicated that the instrument was reliable.

DATA COLLECTION AND ANALYSIS

Survey data collected for the study were analysed using simple percentages to determine the pattern of responses on the reformation needed for optimum performance. Also, Z score was used to compare two variables (male and female teachers) to know if the responses of the two groups were significantly different.

FINDINGS AND DISCUSSIONS

Tables 1 to 4 present respondents rating of the items on policies, administrative machinery, facilities and skills respectively. Table1 shows that technical and vocational teachers agreed with all the statements on policy except items 4 and 8. In other words, they felt that a bachelor's degree or its equivalent should not be the least qualification acceptable for vocational training. In addition, teachers did not agree on the percentage to allocate to theory and practical components of a technical/vocational programme offerings.

Table 1

Policies for Reforming Technical and Vocational Education (the figures are percentages)

S/N	STATEMENTS	SA	A	U	D	SD
1	Technical and Vocational programme should be geared to manpower needs of the nation.	73	24	-	3	-
2	Vocational and Technical Education offerings should be based on the needs of the country	61	33	-	4	2
3	Programme offerings should be consistent with current, as well as future needs of commerce and industry.	55	40	3	2	-
4	Assessment of technical and Vocational programme offerings should be 60% practical work and 40% theory.	17	21	15	32	15
5	Include industrial training as part of pre-service and in-service training for serving teachers of Technical and Vocational programmes.	52	44	3	-	1
6	Technical and Vocational programmes should be jointly financed by Federal and State governments.	56	34	6	-	4
7	Vocational teachers should, as a matter of policy, be placed on different salary scale to bridge the gap with the pay in the industry and the regular salary of all teachers.	41	33	17	4	5
8	A bachelor's degree or its equivalent should be the least qualification acceptable for vocational training	9	26	20	34	11
9	Computer education should be made compulsory for all vocational students	48	34	9	9	-

Table 2 shows that the teachers accepted all statements on administrative reform.

Table 2

Administrative Machinery for Improving Technical and Vocational Education

S/N	STATEMENTS	SA	A	U	D	SD
1	Entrepreneurship skills should be emphasized in technical and vocational programmes.	30%	61%	4%	5%	-
2	Develop a dynamic in-service programme for technical and vocational teachers	57%	40%	3%	-	-
3	Sell new ideas, innovations and benefits of technical and vocational programme to the public	45%	44%	7%	2%	2%
4	Sensitise the public about the programme and practices in vocational schools.	38%	59%	3%	-	-

Table 3 shows that the teachers agreed with all the items.

Table 3
Facilities for Reforming Technical and Vocational Education

S/N	STATEMENTS	SA	A	U	D	SD
1	Technical and vocational programmes should be provided with well-equipped libraries.	69%	31%	-	-	-
2	Ensure that each Local Government has well-equipped technical college.	22%	30%	10%	27%	11%
3	Area vocational centres should be established to serve secondary schools in a given geographical location.	33%	45%	11%	6%	5%
4	Technical and vocational programmes should be equipped with state-of-the-art facilities	40%	45%	10%	3%	2%

Table 4 shows that teachers agreed with all items on skills acquisition.

Table 4
Practical Skills for Technical and Vocational Education

S/N	STATEMENTS	SA	A	U	D	SD
1	Subject matter in technical and vocational programmes should be practical oriented	60%	35%	3%	2%	-
2	Task analysis is vital to effective training in skill development.	40%	46%	14%	-	-
3	Assessment, of technical and vocational programme offerings should be 60% practical work and 40% theory.	39%	23%	6%	16%	16%
4	About to graduate vocational students should be encouraged to acquire simple vocational machines such as sewing machines, typewriters, welding machines (depending on one's specialization) to enhance the graduate's manipulative skills and easily fall back on those machines if he/she decides to embark on self-employment.	35%	49%	7%	9%	-

Data presented in Table 5 did not show significant differences between the responses of male and female teachers.

Table 5

Gender Differences on Policies for Reforming and Repositioning Technical and Vocational Education

S/N	STATEMENTS	Gender	N	X	SD	Z
1	There should be adequate link between industry and institutions offering vocational Education.	M F	505 73	4.53 4.51	0.46 0.45	0.35
2.	Technical and vocational Education (TVE) programme should be geared to manpower needs of the nation.	M F	505 73	4.72 4.70	0.53 0.56	0.29
3.	TVE offerings should be based on the needs of the country.	M F	505 73	4.55 4.51	0.69 0.65	0.49
4	Programme offerings should be consistent with current, as well as future needs of commerce and industry.	M F	505 73	4.48 4.46	0.67 0.66	0.24
5	Assessment of TVE programme offering should be 60% practical work and 40% theory.	M F	505 73	3.30 3.32	0.93 0.98	0.17
6	Include industrial training as part of pre-service and in-service training for teachers of TVE programmes.	M F	505 73	4.46 4.57	0.69 0.71	1.24
7	TVE programmes should be jointly financed by Federal and State Governments	M F	505 73	4.46 4.51	0.79 0.80	0.50
8	Vocational teachers should be placed on a different salary scale to bridge the gap with the pay in the industry and the regular salary of all teachers.	M F	505 73	4.28 4.27	0.88 0.96	0.52
9	Bachelor's degree or its equivalent should be the least qualification acceptable for vocational teaching.	M F	505 73	3.27 2.98	1.32 1.32	1.75
10	Computer education should be made compulsory for all vocational students.	M F	503 73	4.23 4.42	0.93 0.79	1.88

Z- Critical (or table) value = 1.96 at the 0.05 level of significance
X= Means
SD= Standard Deviation
NS= Not Significant
N = Number of subjects.

The results showed that the Technical and Vocational teachers realized the need to reform TVE with reference to policy formulation, administrative machinery, facilities and curriculum review. These findings are consistent with some part of the Communiqué on the recently concluded National Seminar on Technical and Vocational Education in Nigeria under the auspices of the Federal Ministry of Education (November, 2000) recommending, inter alia:

(1) rehabilitation and expansion of facilities in Polytechnics, Technical Colleges and Secondary schools for TVE programme;
(2) incorporating entrepreneurship education in all TVE core curricula; and
(3) increasing the funding level of education (by Federal and State Governments) to 26 per cent of the annual budget and give priority to TVE sector.

Our findings supporting the establishment of Area Vocational Centres agree with the views of Heenan (1985) on the merits of such centres in the United States.

RECOMMENDATIONS

The findings of this study have important implications for the Government, the administrators and the teachers of Technical and Vocational programmes. Thus, we hereby recommend:

(a) the establishment of Area Vocational Centres;
(b) a revisitation of policies governing TVE in Nigeria;
(c) the introduction of Computer Education in all TVE programmes;
(d) joint funding of TVE programmes by both the State and Federal Governments;
(e) developing a very dynamic in-service programmes for TVE teachers; and
(f) the development of Entrepreneurship Education as part of TVE programmes.

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Key Words/Terms

- Technical and Vocational Education
- Technology Education
- Entrepreneurship