

Formulation and Implementation of Technical Education Policies in Rivers State, Nigeria

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ABSTRACT: This study examines the implementation of technical education programmes in Rivers State, Nigeria. A socio-technical system approach supported by human capital theory provided the framework for the study. A descriptive survey design was adopted and used for this study in which the population was comprised of five public technical colleges in Rivers State. A sample of 144 academic staff was selected using a stratified random sampling technique. This sample responded to a 30 item Vocational and Technical Education Programme Implementation Assessment Questionnaire (VATEPIAQ), designed by the researcher and based on a modified Likert-type model. Descriptive statistics were used for data analysis. This study found that the quality of teaching staff in technical schools is moderately high, but relatively inadequate. The facilities available in technical schools in Rivers State for programme implementation were grossly inadequate and in poor condition. It is recommended by this study that only professionally qualified technical and science teachers be recruited into the system. Those without professional qualification who are already in the system should be encouraged to undergo post-graduate diploma courses in education.

KEYWORDS: Education, Formulation, Implementation, Policies, Professional, Technical

I. INTRODUCTION

With the onset of colonialism and the introduction of Western education in Nigeria, science and technical education have long been treated as relatively insignificant aspects of the country's education system. This has created a situation whereby the majority of Nigerian youth, especially prior to the last decade, were trained for clerical and/or white collar jobs and so failed to develop a number of practical skills. The early pre and post-independence education policies aimed at sustaining the new and independent political structure and administration thus led to high rates of unemployment, and increases in crime rate and juvenile delinquency. In other words, the marginalization of practical education indirectly fed the creation of new social problems that Nigeria continues to contend with (Fafunwa in Nwosu, 2005). It is increasingly important that schools not only develop the mental, moral and physical capabilities of the students, but also enable them to acquire skills in technology, including computer literacy, so that they might participate effectively in contemporary economic activities. In other words it is the role of the education system to ensure that the population is reproduced culturally and socially, and that the children, in particular imbibe the values and skills they need to function as mature adults.

The political, economic and cultural changes brought about by the country's independence highlighted the need for total reform of the education system in Nigeria. In 1969 a national curriculum conference was held in Lagos in response to this need. Its greatest result was a new philosophy for Nigerian education that later gave birth to the National Policy on Education first published in 1977 and later revised several times (1981, 1989, 2004). The National Policy on Education became the first document to streamline education concepts and goals and to prescribe uniform operation of the country's educational system, thereby giving vocational and technical education programmes in Nigeria a scheme of place.

Vocational and technical education, according to Yusuf (2006), is a form of education that seeks to prepare persons for employment in recognized occupations. This type of education provides the skills, knowledge and attitudes necessary for effective employment. Odogwu (2005) describes vocational education as a type of education that emphasises preparation and participation in an occupation of social value. Contrasted with general education, vocational education is skill-oriented and trains both the head and the hands. (Oranu, 2009) The Federal Republic of Nigeria (2004) further describes vocational education as that aspect of education that leads to the acquisition of practical skills as well as applied scientific knowledge.

The fact remains, however, that none of these will be accomplished if students in schools are improperly trained. Effective training of students cannot be accomplished in the absence of certain ingredients

that create conducive environments for teaching and learning. These ingredients include the right quality and quantity of teachers, well equipped workshops and laboratories with up-to-date materials, and adequate tools and other materials. Omekwe (2009) argues that for the effective implementation of any education programme, adequate human and material resources must be made available to the schools. In particular, a large enough number of trained teachers with different types of expertise (science, language, technology, etc.) must be recruited and posted to the schools as and when required. In addition, for effective management, academic staff must be complemented by non-academic staff in proportionately adequate numbers.

Before the introduction of formal education in Nigeria, the youths were trained for specific occupations and careers through the apprenticeship scheme, or on-the-job training. The introduction of reading, writing, and arithmetic (3Rs), and academic education by the colonialists became associated with white collar jobs which were seen as an instrument for upward mobility in the social classes. However, the Federal Government, in an attempt to address this problem, built in vocational and technical education programmes into its National policy on education, and as a strategy for effective implementation of the programmes, made science education compulsory at the primary school level. The policy identified several types of vocational and technical education programmes, which include, the Pre-vocational and vocational programmes offered at the junior and senior secondary schools, including the technical colleges, at the secondary school level, the polytechnics and the colleges of education (technical) at the post-secondary level. Others are open and private apprenticeship schemes, skills acquisition (NGOs), On-and-off the job training schemes (non-formal), etc.

The purpose of this policy was to give our children in technical schools different subject options upon which they could build their career in future. As laudable as the policy provision was, issues have been raised regarding the implementation of these programmes, especially in the areas of staffing, facilities, and funding in Rivers State. This view indicates that the programme implementation has been largely ineffective and has continued to show disappointing outcome. And the obvious result of all this was the production of misleading or unreliable plan projections, forecasts and targets against the predetermined goals. The situation calls for proper identification of factors that tend to inhibit the effective implementation of the programmes, by highlighting some of the shortcomings since the inception. The study therefore, sought to investigate the issues regarding the implementation of vocational and technical education programmes at the technical school level in Rivers State, as well as the challenges facing the programmes.

II. MATERIALS AND METHODS

This study represents descriptive survey research, aimed at investigating the implementation of vocational and technical education programmes in Rivers State. This research collects data and describes it in a systematic manner. Data is collected as is, analysed and reported without manipulation or distortion of any of the variables. Ololube (2009) defined this approach as research designed to gather systematic descriptions of existing phenomena in order to describe or explain what is going on. The choice of a descriptive survey method is borne out of the fact this method focuses on people and their attributes which will help the researcher to understand and explain the way in which vocational programmes can be effectively implemented. To achieve this, the researcher has used a survey questionnaire, observation schedule and document analysis.

2.1 Method of Data Analysis

In preparing the data for analysis, the researcher developed keys for coding the information contained in the research. Descriptive statistics was used to analyse the data collected and to obtain the mean assessment for each scale item. Responses to the Section B questionnaire items were weighted across a four point Likert-type scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The deductions from the document analysis were weighted based on availability, quantity, qualification, relevance and experience. The data gathered from the observation schedule was weighted based on availability, quantity, condition, and adequacy. A percentage scale of the responses to each item was analysed and used to answer the research questions. The research hypotheses for this study were tested using *z*-test statistics to establish the significant differences between the variables in the study. There was a $p < 0.05$ level of significance for all of the hypotheses, while the acceptance or rejection of null hypotheses was based on the calculated value of the *t*-test analysis.

III. RESULTS

The data presented in this chapter was gathered using three sets of instruments. The first was document analysis, which gathered data on the availability of teachers, their quality, experience, and subject relevance. The second instrument was an observation schedule (chart) used to gather information on the availability, quantity, condition and adequacy of facilities and equipment in vocational and technical colleges in Rivers State. The third was a 35-item vocational and technical education programme implementation assessment questionnaire (VATEPIAQ), which elicited information on funding strategies adopted by government, and challenges and strategies for improving the implementation of vocational and technical education programmes in Rivers State.

3.1 Research question one

What qualities of teaching staff have been recruited for vocational and technical education programmes in Rivers State?

TABLE 1. Analysis of respondents' perceptions towards the quality of teaching staff

S/N	Schools	No. of Teachers	No. of Qualified Teachers	% of Teachers Qualified	No. of Unqualified Teachers	% of Teachers not Qualified
1	GTC Ahoada	53	45	84.9	8	15.9
2.	FSTC Ahoada	47	35	74.5	12	25.5
3.	GTC PH	107	82	76.6	25	23.4
4.	GTC Tombia	17	12	70.6	5	29.4
5	GTC Elo-Ogu	17	12	70.6	5	29.4
TOTAL		241	186		55	

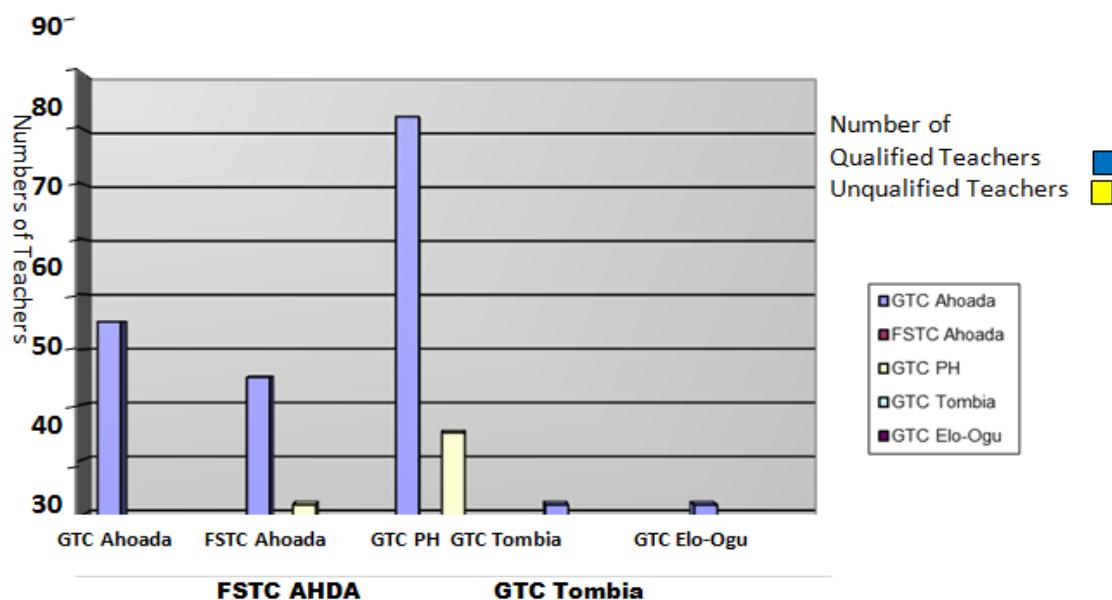


FIGURE 1: Labour force quality for implementation of vocational and technical education programmes in Rivers State

Table 3 and Figure 1 show that at GTC Ahoada, there are 53 teachers of which 45 (84.9%) have qualifications ranging from NCE, National Diplomas and Degrees in Science and Technical Education, and are therefore qualified. Eight (8) (15.9%) did not possess these qualifications and so are not qualified. At FSTC Ahoada, there are 47 teachers, 35 (74.4%) of whom also had qualifications ranging from NCE, National Diplomas and Degrees in Science and Technical Education and are qualified, while 12 (25.5%) did not possess these qualifications and are not qualified. Of the 107 teachers at GTC Port Harcourt, 82 (76.6%) have qualifications ranging from NCE, National Diplomas and Degrees in Science and Technical Education and are qualified, while 25 (23.4%) did not have these qualifications and are not qualified. Of the 17 teachers at GTC

Tombia, 12 (70.6%) are deemed to be qualified based on their educational attainments, while 5 (29.4%) are not qualified in that they are working with less than standard qualifications. GTC Elo-ogu has a similar number of teachers and qualified/unqualified teachers as GTC Tombia.

These results shows that larger percentage of the teachers in existing vocational and technical education programmes are qualified and moderately experienced and have met the teaching requirements as required by the National Policy on Education (FRN 2004). It became clear, however, in interviews with the principals that such teachers are not sufficiently provided for by the government.

3.2 Research question two

What facilities have been put in place for vocational and technical education programmes in Rivers State?

Table 2: Analysis of respondents' perceptions of facilities and equipment in technical schools

1	ITEMS	ADEQUACY		
		% Adequate	% Inadequate	Status
1.	Classroom Blocks	66.7	33.3	Adequate
2	Electrical Workshop	20	80	Inadequate
3.	Welding Workshop	25	75	Inadequate
4.	Automobile Workshop	25	75	Inadequate
5	Assembly /Exam Hall	40	60	Inadequate
6	Wood Work Workshop	33.3	66.7	Inadequate
7.	Painting and Decoration Workshop	66.7	33.3	Adequate
8.	Building Workshop	33.3	66.7	Inadequate
9.	Home Economics Lab	80	20	Adequate
10	Computer and Secretarial Studies Lab	20	80	Inadequate
11	Photography Equipment	14.3	85.7	Inadequate
12.	Air-Conditioning and Refrigeration Equipment	20	80	Inadequate
13	Welding and Fabrication Equipment	25	75	Inadequate
14	Electrical and Electronics Workshop	20	80	Inadequate
15	Electrical Installations and Maintenance Equipment	80	20	Adequate
16	Radio, Television Repair Equipment	80	20	Adequate
17	General Study Classes	40	60	Inadequate
18	Wood trade Equipment	75	25	Adequate
19	Printing Workshop	40	60	Inadequate
20	Textile Workshop	66.7	33.3	Adequate
21	Library	40	60	Inadequate
22	Integrated Science Lab	80	20	Adequate

Table 2 shows that items with serial numbers 1, 7, 9, 15 and 16, 18, 20, 22 (8 items in total) are deemed to be 66.7, 66.7, 80, 80 and 80 per cent adequate and so are sufficient for the implementation of vocational and technical education in Rivers State. The remaining, 2, 6, 8, 10-14, 17, 19 and 21 (14 items in total) were deemed to be less than 50% adequate and so fail to meet the needs of vocational and technical education programmes in Rivers State.

IV. DISCUSSION

4.1 Quality of teaching staff

This study had revealed that the quality of academic staff in vocational and technical colleges in Rivers State is moderately high but relatively inadequate, and that some staff are far less experienced. It is also evident from this study that some teachers do not have the requisite teaching qualifications even though they hold high degrees in the trade that they teach. Further investigation revealed that some qualified teachers are working only on a part-time basis (on casual appointment) and so embargo employment. Oranu (2009) upheld that teachers play an indispensable role in any educational system and should be adequately equipped with relevant qualifications since the ability of the teacher to perform their functions is dependent on the learning they have done.

Earlier studies by Ogushi (2008) found that the problems faced by education administrators in the implementation of vocational education programmes in Nigeria include, among other things, incompetent technology teachers. The present findings are consistent with the earlier findings of Omekwe (2009) which revealed that teachers in some of the core subjects, including physics, chemistry and biology, were not qualified and so degraded the quality of the education provided. The present findings also corroborate the United Nations Education and Children's Organization (UNICEF) 1976 Report that found that poor quality of teaching staff is responsible for the poor quality of skill acquisition in vocational schools.

This study, and its predecessors, makes a strong case for quality teaching staff as a pre-requisite for quality vocational programme implementation. The engagement of unqualified teaching staff in Nigerian technical colleges has an undoubtedly negative and unpleasant effect on student performance in technical school examinations.

4.2 Facilities

This study also revealed shortages in equipment and other facilities needed for successful vocational skills acquisition training. The present findings support earlier findings by Yusuf (2006) that facilities in vocational and technical schools were scarcely available, grossly inadequate and most of them in poor condition. In a similar study by Putsoa (2005), the foremost factors affecting the effective implementation of technical education objectives were also inadequate instructional equipment and the lack of up-to-date school plants.

The present study discovered that some of the available facilities are not functional and/or in deplorable conditions. It is true that a few new structures and or repaired/renovated structures are slowly springing up in some schools as a result of the establishment of the government's Educational Trust Fund (ETF) and interventions by other government commissions (NDCC). The fact remains, however, that the pace of these developments is too slow. Government must act quickly, realizing that the establishment of vocational schools is capital-intensive, to source the funds needed for purchasing relevant equipment and facilities as the availability of these materials in schools accounts for the quality of their graduates. Obulor (2006) and Osam (2009) concur and noted that vocational schools must produce people with broad knowledge and skills to fill existing gaps in the workforce and fulfil the nation's aspirations in the world of technology.

Adesina (1982) likewise asserts that the quality of education that our children receive bears direct relevance to the availability or the lack of physical facilities. Discussions with the principals of the schools involved in this study reinforced the opinions of other respondents on the importance but lack of facilities for the implementation of vocational and technical education programmes in Rivers State. This situation is, in part, responsible for the poor quality of skills acquired in vocational schools as facility availability has a direct effect on the teaching and learning process.

V. CONCLUSION

This has offered new insight into the condition and challenges of vocational and technical education programmes in Rivers State. It has created an awareness of the need to provide well equipped technical colleges in Rivers State for successful programme implementation.

The successful implementation of vocational and technical education programmes is yet to be achieved in Rivers State. The main issues of concern include a dearth of qualified vocational and technical teachers, especially in semi-urban areas, inadequate equipment and facilities, and poor funding strategies. In the current context, the desired goals of these programmes can hardly be expected to be met. In order to arrive at the effective implementation of these programmes in Rivers State, it is important to realize that successful management of any policy depends to a large extent on the support it receives, not only from the formulators (government), but also from those expected to implement and consume it. On the strength of the results of this study, the researcher recommends the following:

- (1) Only professionally qualified technical and science teachers should be recruited into the system. Those without professional qualifications already in the system should be encouraged to undergo post-graduate diploma courses in education.
- (2) Policy provisions should include arrangements to attract foreign agencies and private investors to provide grants-in-aid to the vocational and technical colleges to tackle the issue of inadequate instructional materials and facilities, up-dating and improving on the conditions of existing ones.

It is important that similar studies be carried out in other states in Nigeria and that subsequent investigations cover other vocational programmes such as the skills acquisition scheme of NGOs, private and public apprenticeship schemes, and on-and-off the job training schemes as found in polytechnics and colleges of education.

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