

A DISCOURSE ON CURRICULUM PLANNING, IMPLEMENTATION AND DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION (VTE) IN NIGERIA BEYOND 2020

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Abstract

This paper focused on a Discourse on curriculum planning, implementation and development in vocational and technical education in Nigeria, in 2020 and beyond, using Benue State as area of study. A descriptive survey research design was adopted. A questionnaire with reliability coefficient of 0.76 was employed. Four research questions guided the study. The subjects for the study comprised 170 technical teachers, sampled by means of systematic random sampling technique. Data was analyzed using mean and standard deviation. The findings include that curriculum when planning, should reflect what students will learn as a consequence of what is available in their environment devoid of complex and ambiguous content which will be difficult to implement, among others. Recommendations were made based on the result.

Curriculum is a deliberate, systematic and planned attempt undertaken by the school to modify or change the behaviors of the citizens of a particular society. UNESCO (2003) sees Curriculum as an organized programme of both theoretical and practical studies, of which the successful completion is considered necessary to achieve specified educational goals corresponding to different levels of knowledge and qualification. Curriculum states all the learning which is planned and guided by the school whether it is carried out in groups or individually, inside or outside the school. It is the total learning experiences provided by school. It include the content of course (9th syllabus), the method employed (strategies) and other aspects like norms and values which relate to the way the school is organized. Curriculum is the planned and guided learning experiences and intending functions formulated through the systematic

reconstruction of knowledge and experiences under the auspices of the school for learners. It is an embodiment of Knowledge, skills and attitude a nation through her schools, impacts to her citizens. According to Offorma (2009), the Curriculum of a school consists of all the situations that the school may select and consistently organize for the purpose of bringing about changes in the behavior of the learners and as a means of developing the personality of the individuals.

Curriculum planning is a process of fashioning out the types of society people expect and the type of experiences that will prepare the citizens to grapple with the demand of globalization without necessarily altering the ultimate goal of education. According to Udosen (2009) the reason for curriculum planning in any society is to ensure that the programme of education is designed to meet the educational needs of its children in terms of assisting and guiding them to acquire its culture and general way of life. It is the intentions of the society that its children should progressively grow, develop and become responsible and productive adult members. Curriculum requires careful planning and re-planning in order to realize these goals. It is a thoughtful planning where choices are made regarding the types of learning opportunities that are suitable and valuable for the youth of the society. The steps involved in planning Curriculum as Dada (1999) in Udosen (2009) observed have to start with conceptualization and end with the design of the programme of what they want the curriculum to help them achieve. Curriculum planning starts from the top level where the total educational programme is conceived and designed down to the classroom level where the final action of implementation takes place.

In the development of curriculum, different models are used and a model seeks to provide answers to some basic questions which relate to building some educational programmes such questions are “ why” ‘What’ and how of education, The ‘why’ question seeks to provide a precise statement of objectives which is philosophical and draws from other areas of educational foundations. Other sources of objectives include the learner, society, nature of the subject, and psychology. (Ivowi, 2009). The ‘what’ question tries to tackle the problems of selecting and organizing learning experiences as well as the planning and building of teaching/learning units. The ‘how’ question goes to consider teaching methods, techniques and approaches suitable for the programmes considering the level of the learners and the expectations of the society. Such approach as modular approach which is very popular in technical education where various trades have self-sustaining units for the acquisition of employable skills must be encouraged. Curriculum in Vocational and technical education is the sum total of the series of activities of the educational programmes that prepares the students mainly for occupations requiring manipulative skills or non technical occupations in such fields like agriculture technology, business education among others organized to secure confidence and experience by the individual students. Vocational and technical

education is viewed as a comprehensive term referring to the educational process which involves in addition to general education the study of technologies and related sciences and the acquisition of practical skills, ability, attitude and knowledge relating to occupation in various sections of economic and social life. The educational goals of vocational training which is directed to developing the particular skills and related knowledge required by a specific occupation will only be achieved through a carefully designed and implemented curriculum, which must focus on basic related skill and knowledge that are judged important to be learnt. Vocational and Technical Education involves practical skills like craft, clothing, weaving, basket making, blacksmithing, metal work, typing, data processing and other forms of sophisticated engineering and mechanization. The difference between Vocational Education and Technical Education lies on the intensity of scientific knowledge (Kpernyam, 1998). Virtually all countries of the world are concerned with the development and implementation of Vocational and Technical Education curriculum and that produces within an economically viable structure capable of producing skilled graduates who meet the requirements for employment in industries.

Curriculum implementation is the actual engagement of learners with planned learning opportunities. Curriculum implementation stage is where in the midst of learning activities, teachers and learners are involved in negotiations, aimed at promoting learning. In curriculum implementation, efforts have been made to examine factors which enhance or militate against effective curriculum implementation of technical and vocational education. Implementation according to Chambers (1993) in Ekpo and Osam (2009) is the various steps involved in producing a functional data. It is the various steps involved in achieving the desired objectives. It is the delivery stage in the curriculum process. In which the relevant inputs are brought in direct contact with the target audience in such a way that through variety of activities, learning experiences and mastery can be maximally achieved at minimal cost. Curriculum development in Vocational and Technical training should not only meet the goals and objectives of training but also be implemented effectively. There has been a variety of models that have been tried in the past but curriculum development is still facing some challenges. But recently, the trainers and educators have developed competency-based curriculum which can be implemented using multi-media educational resources that have now become available (Onweh, 2011). Given the challenges of 2020 century and beyond, Technical and Vocational Education requires change and innovation and these must be effectively implemented. To achieve this, certain considerations must be taken care of, for the new curriculum to be effectively implemented in Nigeria beyond 2020. This gives rise to the question what are the effective ways of planning and implementing Technical and Vocational Education curriculum in Nigeria beyond 2020?

Purpose of the Study

The main purpose of the study was to identify ways of planning and implementing VTE curriculum for national development in Nigeria in 2020 and beyond. Specifically the study was set to:

1. Identify those logistics needed for effective planning of VTE Curriculum to prepare Nigeria beyond 2020.
2. Discover those functional equipment, facilities and materials needed for the implementation of VTE.
3. Find out those constraints that will hinder the effective implementation of VTE curriculum.
4. Identify the strategies needed for effective implementation of VTE curriculum for the development of Nigeria in 2020.

Research Questions

The following research questions were formulated to guide the study:

1. What logistics are needed for the effective planning and implementing of VTE Curriculum for national development in Nigeria beyond 2020?
2. What are the equipment, facilities and materials needed for the implementation of VTE curriculum for the development of Nigeria beyond 2020?
3. What are the constraints to the effective implementation of VTE curriculum for national development in Nigeria beyond 2020?
4. What are the strategies needed to enhance the effective implementation of VTE curriculum for the development in Nigeria beyond 2020?

Methodology

This study adopted a descriptive survey design which is aimed at collecting data from a given population so as to explore their opinions. The population used in the study was 566. It was made up of all technical teachers from technical colleges in Benue State. Simple random sampling technique was adopted in selecting 30% of the respondents from 566 technical teachers. This gave a total of 170 technical teachers.

A 40 item structured questionnaire on planning and implementation of VTE curriculum was developed by the researcher from the literature reviewed and used for data collection in accordance with the focus of research questions. The questionnaire was divided into four sections of needed ratings. The items were assigned a response options and numerical values respectively of highly needed (4), averagely needed (3), slightly needed (2) and needed (1). The respondents were to indicate the level of need for each questionnaire items by putting on a tick (✓) under appropriate Colum against each of the items.

Five experts in Vocational and Technical Education, from the department of Vocational and Technical Education, validated the instrument. Their suggestions were used to improve on the draft copy before the final version of the questionnaire was produced. The Cronbach Alpha reliability method was used to determine the internal consistency of the instrument. A reliability co-efficient of 0.81 was obtained the research administered and retrieved the questionnaire by themselves. The data collected were analyzed using mean (X) and standard deviation. It was decided that mean scores up to 2.50 and above be accepted while mean scores below 2.50 were rejected.

Results

Research Question 1: What logistics are needed for the effective planning and implementing of VTE Curriculum for national development in Nigeria beyond 2020?

Table 1: Mean and Standard Deviation Rating of Technical Teachers on the Logistics that are Needed for Effective Planning and Implementation of VTE Curriculum

S/N	Statement	X	SD	Remark
1.	Curriculum should reflect what students will learn as a consequence of what they do.	4.1	0.69	H. Needed
2.	Curriculum must give the teachers suggestions for planning practical exercises for students	4.11	0.79	H. Needed
3.	Curriculum should have additional objectives that prepare the learners to be able to manage available resources that will help enhance quality of their lives.	4.33	0.78	V.H. Needed
4.	Curriculum must equip students with current information on management principles and new technologies used all over the world.	4.20	0.65	H. Needed
5.	Improvement in societal perception and interest has culminated in demands for change in content, organization and delivery of VTE to reflect a new emphasis in technology	4.30	0.62	V.H. Needed
6.	Curriculum should have a broadening effect which motivates learners to be more explanatory, realize their capabilities and develop their potentials for success in the world of work.	4.43	0.50	V.H. Needed
7.	Integration of so many areas affect the implementation	4.11	0.8	H. Needed
8.	Curriculum that is too complex and ambiguous it difficult to implement.	4.01	1.2	H. Needed
9.	Curriculum must encourage students to be more creative by using all kinds of resources available within their environment.	4.05	1.7	H. Needed
1	The curriculum must be dynamic in nature	4.30	0.8	V.H Needed

Table 1, presents respondents' responses in logistics needed for effective planning and implementation of VTE Curriculum. A close look at the mean responses of each item posed to determine logistics needed for planning and implementing VTE curriculum shows that respondents agree with all the items as inducted by the mean responses.

Research Question 2: What are the equipment, facilities and materials needed for the implementation of VTE curriculum for the development of Nigeria beyond 2020?

Table 2: Mean and Standard Deviation Rating of Technical Teachers on Equipment, Facilities and Materials Needed for the Implementation of VTE Curriculum for the Development of Nigeria Beyond 2020.

S/No.	Statement	X	SD	Remark
1.	Well equipped resource room should be provided	4.01	0.90	H. Needed
2.	Provision for ICT facilities should be made	3.50	0.95	H. Needed
3.	Well furnished and adequate offices for the implementers	4.00	0.91	H. Needed
4.	Information technology equipment and software should be provided.	4.50	0.56	Very Highly Needed
5.	Provision of adequate textbooks	3.95	0.97	Highly. Needed
6.	Making loans available to finance the purchase of equipment and materials	3.78	0.99	Highly Needed
7.	Adequate power supply	4.65	0.52	Very Highly Needed.
8.	Adequate furniture for teachers.	4.11	0.87	H. Needed
9.	Provision for technical training equipment and funding	4.05	0.89	H. Needed
10.	Provision of improved and modern scientific and technological devices	4.03	0.91	H. Needed

Data on Table 2 shows that all the items have mean values above 2.50. This means that they are necessary for effective implementation of VTE curriculum. Items 4 and 7 were rated very highly needed. The standard deviations of the scores generated on all the items were small, indicating that the variation of the scores from the mean was not much.

Research Question 3:What constraints hinder the effective implementation of VTE curriculum for national development for the preparation beyond 2020?

Table 3: Mean and standard deviation of Technical Teachers on Constraints that Hinder the Effective Implementation of VTE Curriculum for National Development for the Preparation Beyond 2020.

S/No.	Statement	\bar{X}	SD	Remark
1.	Curriculum content overloaded	4.50	0.51	V.H. Needed
2.	Mismatch between technical training and world of work	4.28	0.64	H. Needed
3.	Insufficient student's participation in practical activities	4.21	0.68	H. Needed
4.	Neglect of students needs at various levels of curriculum planning and development	4.19	0.76	H. Needed
5.	Insufficient provision of life coping skills in the VTE system	4.30	0.60	V.H. Needed
6.	Inadequate supply of competent and motivated technical teachers	3.95	0.84	V.H. Needed
7.	Inadequate and incomprehensive evaluation techniques.	4.18	0.76	V.H. Needed
8.	Inadequate provision of infrastructure	4.37	0.54	V.H. Needed
9.	Lake of adequate vocational guidance services	4.05	0.70	V.H. Needed
10.	Professional development of technical teachers engenders confidence, good academic performance and better outcome	4.40	0.52	V.H. Needed

The statement in items 1, 5, 8 and 10 have a mean rating of 4.50, 4.30, 4.37 and 4.40 respectively and standard deviation of 0.56, 0.60, 0.54 and 0.52. Respondents agreed that the curriculum content in VTE is overloaded thereby contribute to the hinderence in implementation of VTE curriculum. Other items with mean scores above 2.50 and corresponding standard deviation revealed that all the listed items contributed to the poor implementation of VTE curriculum.

Research Question 4: What are the strategies needed to enhance the effective implementation of VTE curriculum for the development in Nigeria beyond 2020?

Table 4: Mean and Standard Deviation of Technical Teachers on the Strategies Needed to Enhance the Effective Implementation of VTE Curriculum for the Development in Nigeria Beyond 2020?

S/No.	Statement	\bar{X}	SD	Remark
1.	Exchange of visit between the industry and college will keep the teachers abreast of the latest technology and make them better informed	4.20	0.69	H. Needed
2.	Teachers should return the responsibility for learning to students, so that they can understand their learning strengths and weaknesses and feel self directed in their knowledge quest	4.14	0.67	H. Needed
3.	Utilization of assessment measures, not just to assign grade, but as most effective tools, to promote learning.	3.99	0.80	Needed
4.	Designing ICT rich learning materials/environment for technical students	4.00	0.66	H. Needed
5.	Curriculum developers should reflect what students will learn as consequences of what they do	4.13	0.67	H. Needed
6.	Curriculum should not be too complex and ambiguous and should be easy to implement.	4.07	0.65	H. Needed
7.	Provision of adequate facilitate and materials for effective curriculum implementation by the teacher.	3.92	0.81	Needed
8.	Practical aspects of ICT Training should be included in VTE curriculum and its mastery ensured before graduation.	4.01	0.70	H. Needed
9.	Adequate provision of guidance and counseling environment for both parent and children	4.12	0.74	H. Needed
10.	Continuous training to equip them with new emphasis in technology	3.84	0.94	Needed

The result of table 4 shows that all the strategies indentified for enhancing the effective implementation of VTE curriculum national development in Nigeria beyond 2020, have high values. Item 1, which is exchange of visit between the industry and college keep the teachers abreast of the latest technology and make them better informed, has the highest mean of 4.20 and a standard deviation of 0.69, while item 10-continuous training and re-training of technical teachers to equip them with emphasis on new technology has the least response mean value of 3.84 with a corresponding standard deviation of 0.94. This implies that all the strategies listed would be needed to enhance the effective implementation of VTE curriculum for national development in Nigeria beyond 2020

Discussion

The study revealed in table 1 that when planning the curriculum what students will learn as a consequence of what they do should be reflected. The findings also agreed that logistics should be considered during planning and developing VTE curriculum: curriculum must give the teachers suggestions to plan practical exercises for students; avoid complex and ambiguous content which will be difficult to implement; curriculum must equip the learners with current information and management principles and new technology used all over the world. This is in line with the view of Offorma (2005), who stated that curriculum should have a total concept that is expected to prepare and equip students/graduates with the relevant professional life skills for world of work.

Findings also included that adequate equipment, facilities and materials should be planned along during planning and developing VTE curriculum. These include: well furnished and adequate offices for the implementers; all information technology equipment and software; adequate and relevant textbooks; technical training equipment and funding. Akuakanwa (2011), asserted that the consideration of infrastructure when planning curriculum is to promote the attainment of stipulated educational objectives. Insufficient facilities reduce students' interest and deters the teacher's continued efforts towards successful teaching and learning of technical courses. The finding is also in line with that of Okorieocha (2013), who lamented that the challenges of youth empowerment through technical vocational education and training include inadequate funding of VTE and lack of adequate workshop facilities and training materials. The success and developmental advancement in Vocational Technical Education and training which was actualized in the past years has been frustrated to failure due to poor funding (UNESCO, 2004).

The study revealed certain constraints that hinder effective implementation of VTE curriculum for national development in Nigeria. Such constraints include: overloaded curriculum contents; not considering students' needs at various levels of curriculum planning and development; inadequate supply of competent and motivated technical teachers among others. The findings are in agreement with those of Odekina and Omoniyi (2013) who lamented the death of technical teachers in Nigerian technical schools in general. There is inadequate teaching staff and teacher preparation programmes. This generally impedes the interest of intending or interested students.

With regards to table 4, the study established hope in the improvement of the planning and implementation of VTE curriculum by updating teachers competencies through training and re-training and that the facilities needed for VTE curriculum implementation are in place which are necessary for development of a reading society in a globally changing world. This is in line with the finding of Mezieobi and Ezegbe

(2011) who emphasized the essence of training and re-training of teachers in view of contemporary technological changes. It is also agreed and suggested that exchange of visit between industry and colleges will keep the teachers abreast of the latest technology and make them better informed.

Conclusion

Vocational and Technical Education is concerned with the provision of skills, scientific knowledge, attitude and values needed for the place of work. This is only possible where quality curriculum are provided and implemented by qualified teachers using adequate teaching materials and equipment in a conducive learning environment if these observations above are not properly considered, they will constitute a clog in the wheel of quality VTE curriculum implementation in Nigeria, thereby delaying the development of Nigeria beyond 2020.

Recommendations

To make teaching and learning of Vocational and Technical Education more functional and relevant to the learner and then enhance national development in Nigeria in 2020 and beyond, the following recommendations are made:

1. The current ongoing educational reform agenda in Nigeria should hasten efforts in providing the facilities, equipment and materials needed for effective implementation of VTE curriculum in various schools.
2. There should be constant exchange of visits between the industry and the colleges, to keep the teachers abreast of the latest technology and make them better informed.
3. The curriculum content should not be overloaded and there should be a match between training and world of work.

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