

Development and Implementation of Skill-Based Agriculture Curriculum in Technical, Vocational Education & Training for Improving Carrying Capacity of Schools in North Central Nigeria

Ekele Garba Emmanuel*

Department of Agricultural Education, Federal University of Agriculture, Makurdi, Benue State-Nigeria

***Corresponding Author:** Ekele Garba Emmanuel, Department of Agricultural Education, Federal University of Agriculture, Makurdi, Benue State-Nigeria.

Received: September 27, 2018; **Published:** October 16, 2018

Abstract

The study x-rayed development and implementation of skill-based agriculture curriculum in technical, vocational education and training (TVET) for improving carrying capacity of schools in the study area. The need for overhauling agriculture and TVET curriculum was discussed. This is significant as there can be no meaningful economic growth without adequate attention to skilled-based curricula used for teaching and learning in TVET. Functions of some regulatory bodies for TVET in terms of curriculum implementation were highlighted in addition to the need for funding TVET. Several bottlenecks were identified in TVET curriculum implementation and it was recommended amongst others that regular training for teachers and adequate funding be embarked upon if Nigeria is to join the league of developed nation of the world.

Keywords: *Implementation; Skill-based; Curriculum; Improvement and Carrying capacity*

Volume 3 Issue 2 October 2018

© All Copy Rights are Reserved by Ekele Garba Emmanuel.

Introduction

Technical, vocational education and training (TVET) is education based on occupation and employment. Ekele (2018) asserts that it is a type of education that is competency-based and focuses at the acquisition of skills and sound scientific knowledge which enables the individual to withstand demands of technology driven universe. Ovbiagele (2015) explains that vocational education which is also known as TVET could be at secondary, post-secondary or tertiary levels of education and may interact with the apprenticeship system. For the purpose of clarity, vocational education refers to skill based programmes which are designed for skill acquisition at lower level of education (Okoye and Arimonu, 2016), while vocational education programmes focuses on specific vocation for entry into defined workplace. Technical education is not designed for any particular vocation but provides general technical knowledge. Though, it prepares people for entry into recognized occupation at a higher level but usually lower than the first degree.

Citation: Ekele Garba Emmanuel. "Development and Implementation of Skill-Based Agriculture Curriculum in Technical, Vocational Education & Training for Improving Carrying Capacity of Schools in North Central Nigeria". *Innovative Techniques in Agriculture* 3.2 (2018): 591-596.

The importance of TVET cannot be over emphasized. The Federal Republic of Nigeria (2013) enumerated the objectives of vocational and technical education and training to include amongst others, the training of manpower particularly at professional grades, the provision of technical knowledge and vocational skills, and providing training and skills that lead to the production of craftsmen, technicians and other skill personnel in agriculture and other trades. The curriculum conference of 1969 which later gave birth to National Policy on Education of 1977 and later revised several times in 1981, 1989, 2004 and 2013 gave vocational and technical education the deserved position and prominence. The document has since recommended that introductory technology, practical agriculture and some pre-vocational subjects be made core subjects at junior secondary schools. At the senior secondary school level, animal husbandry, food and nutrition are now offered to students. In view of all these, the curriculum of most schools remains obsolete and still not patterned to the needs of macro-society.

Curriculum Development and Implementation of TVET

Curriculum is the sequence of all potential activities organized under the auspices of the school for training group of students who will be competent and functional members of the society. In the explanation of Ekele, Wever and Longshall (2017), Curriculum is a plan for action which guides instruction and which culminates in a written guide for teachers in the classroom for use in teaching and learning. A major index of a developed economy is a well-structured curriculum of schools coupled with the degree to which teachers meet their obligations as curriculum implementers. The curriculum of a subject with practical content is generally organized into an average of 67% for theoretical classes and 33% for workshop or school farm. Olunloyo (2002) observed that there is need for a paradigm shift to technology oriented approach. This calls for overhaul of the TVET in schools in North Central Nigeria. The effect of the overhauling might not be immediate but will adequately equip our youths with relevant skills to earn a living (Ekele, 2015).

The need for curriculum development in TVET for schools is inevitable due to large number of non- functional graduates produced every year. In the context of this work, curriculum development is used interchangeably with curriculum change. Although, Olaitan and Ali (1997) argued that curriculum development has its central focus on the interest of the learner, the nature of the society and the way in which learning takes place is also important. In a nutshell, curriculum development in TVET refers to a process which determines how curriculum will proceed. It answers questions such as who will be involved in curriculum construction. What procedures will be used in curriculum construction? On the other hand, curriculum change involves the transformation of the entire curriculum scheme including the design, goals, content, learning activities and scope. It involves the change in the value assumptions on which all the curriculum areas are based. To change a curriculum means to change an institution which involves change in values, people, society and culture. Apeji (2013) maintained that the need for periodic review of school curriculum by the government is crucial in view of the fact that modern technology and innovation can rapidly make school curriculum outdated. Good TVET curriculum as a rule of the thumb ought to be dynamic and flexible. The Nigerian Educational Research Development Council (NERDC) took the first step in 2006 by restructuring and realigning the existing primary and junior secondary school curricula into a 9-year basic education curriculum (BEC). BEC addressed issues of entrepreneurship, value re-orientation and life skills (NERDC, 2012). As reported by Apeji (2016), NERDC revised the Senior Secondary School (SSS) curricula to target the acquisition of appropriate knowledge, skills and competencies in science, arts, technical and vocational education for self-reliance. Skill based-curriculum in TVET is synonymous with a curriculum that is relevant. Osam (2013) noted that developing a curriculum or changing a curriculum for TVET must be accompanied by right quality and quantity of teachers, well-equipped workshops, farms, laboratories with up to date materials, and adequate tools. Similarly, Ome-kwe (2009) posits that for the effective implementation of any education programme, adequate human and material resources must be made available in schools. A large number of trained teachers with varied expertise are required for recruitment.

Agricultural Science Curriculum Implementation in Schools of North Central States of Nigeria

Agricultural education is designed to lay a solid foundation for vocational agriculture that is meant to train individuals to acquire relevant occupational skills in farming activities. Farauta and Amuche (2013) reported that the objectives of teaching agricultural science curriculum as jointly developed by the Nigerian educational research development council (NERDC) and west African

Citation: Ekele Garba Emmanuel. "Development and Implementation of Skill-Based Agriculture Curriculum in Technical, Vocational Education & Training for Improving Carrying Capacity of Schools in North Central Nigeria". *Innovative Techniques in Agriculture* 3.2 (2018): 591-596.

examination council (WAEC) are:-encouraging students to use their hands, appreciation for the dignity of labour, familiarity with biological processes, rationality in the students and increasing self –sufficiency and self -reliance in food production. Study by Amadi, Orikpe and Osinem (2007) revealed that curriculum of Agricultural science appeared suitable in terms of skilled acquisition but the reality remains that high level of youth unemployment persists with great number of them having offered agriculture in school certificate. Thus, it is obvious that there is limitation in the curriculum. The introduction of agriculture as a pre- vocational core-subject at the junior and as a vocational core-subject in the senior secondary levels as observed by Farauta and Amuche (2013) is also bedeviled by inadequate requisite knowledge, skills, attitudes and competencies on part of teachers of agriculture. Implementing the new curriculum of agricultural science depends on the effectiveness of teaching styles, methods and strategies which were employed in the process. As regrettable as this situation is, it is further worsened by dearth of professionally qualified teachers of agriculture in North central states of Nigeria.

In the view of Thompson (2002), the training received in the system by learners in vocational technical education (agriculture inclusive) is quite different from what they will meet after graduation. In schools and colleges, emphasis on skill acquisition which is the hallmark of vocational education is an illusion. Odu (2011) asserts that teachers of TVET now turn the programme into a literary kind of education where only theoretical aspects of TVET are taught to the detriment of the practical aspects. In support of this, Ekele (2018) remarked that the ability of the learner to be able to do the job rather than talk about agriculture is the needed ingredient for curriculum implementation. Findings from study by Idris, Rajuddin, Latib, Binsaud and Buntat (2012) revealed that that the curriculum of technical, vocational education and training is lacking in terms of implementation towards achieving desired national goals. It was further revealed from the study that the time allocated for the conduct of both theory and practical classes are grossly inadequate for them to cover the needed areas provided by the curriculum. As a major component of vocational education, agricultural education curriculum need to be x-rayed. Egbule (2002) viewed agricultural education to mean the teaching of skills, values and other forms of required knowledge in products. This includes the farming, processing and marketing of such products. As a vocational sub-unit, agricultural education is taught at the primary, secondary and tertiary levels of education. It is the implementation of the curriculum of agricultural education that would that would pave way for enlarging carrying capacity of schools in the study area.

Contributions of Some Regulatory Bodies in TVET Curriculum Implementation Process

National board for Technical education NBTE as a regulatory body was established by an enabling decree No 9 which was promulgated in January 1977. The ultimate goal of establishing this board according to Olaitan and Ali (1997) was to provide for manpower shortage in technician and craft level. Specifically the board responsibilities include: coordinate and advice federal government on all aspects of technical and vocational education, advice government on financial needs of polytechnics, colleges of technology/technical institutions to enable them meet the objectives of producing trained manpower, receive block grant and allocate them to polytechnic and colleges of technology, to act as the agency for challenging all external aid to polytechnics and colleges of technology in Nigeria, to advice on, and take steps to harmonize entry requirements and duration of courses at technical institutions, to lay down standards of skill to be attained and to continually review such standards as necessitated by technological and national needs and to review methods of assessment of students and trainees, amongst other roles expected of the board.

The National Business and Technical examination Board (NABTEB) is another regulatory body established in 1993 under decree 70 to domesticate craft level examination. Prior to its establishment, city and Guilds, pitman's and Royal society of Art all of United Kingdom were in charge of conducting examination at craft level. Ovbiagele (2015) reports that NABTEB functions amongst others include: conduct modular trade certificate for persons who need to acquire skills in motor mechanics, catering craft trade, secretarial studies book keeping and others, conduct technical and business examination and issue results and certificate, conduct common entrance examinations into technical colleges and allied institutions, monitor, collect and keep records of continuous assessments in technical colleges, conduct research in order to develop appropriate examinations, tests and syllabi in technical and business studies and prepare and submit to the secretary annual report on standard of examinations.

National commission for colleges of education (NCCE) was established in 1989 in order to raise the quality assurance of teachers and supervision of higher education. The functions of the commission amongst others are: make recommendations on the national policy necessary for the full development of teachers education and the training of teachers, lay down minimum standards for all programme of teachers education and accredit their certificates, advise on, and take steps to harmonize entry requirement and duration of courses at the colleges of education, lay down standards to be attained and continually review such standards, review methods of assessment of students and trainees, collate analyze and publish information relating to teachers education in Nigeria stimulate and encourage pre-vocational technical, agricultural, business and home economics education. Suffice to say that the different regulatory bodies have played positive role in ensuring that the curriculum of schools especially at the tertiary level are relevant. The issue here is the implementation of the curriculum by teachers. Moreso, the curriculum of TVET in schools appeared to be obsolete and need to be reviewed according to societal needs. However, there exist obstacles towards the implementation of TVET. The carrying capacity in schools must be maximized for the benefit of all.

Obstacles to TVET Curriculum Implementation for Maximum Carrying Capacity in Schools

Despite the positive contributions of some TVET graduates to economic growth and development of the country, inadequate funding remains a bottleneck. Okoye and Arimonu (2016) enthuses that inadequate funding of vocational institutions has caused the turning out of half-baked graduates. Poor funding also gave rise to inadequate staffing of TVET schools. The result is that experienced and skillful teachers may not be employed. The success of the implementation of core curriculum introduced in 1985 will largely depend on the availability of the necessary equipment and facilities. Absences of this equipment are glaring. The government cannot pretend to be unaware of the benefits inherent in TVET while paying lip service to provision of equipment, facilities and tools. This has made teaching and research in vocational education, science and technology difficult. The resultant effect is the production of insufficient and ill-prepared vocational technical education graduates for driving the technological and economic development of Nigeria.

The inherent problem in the implementation of current curricula in Nigeria is clear. Ojimba (2012) identified some problems that bedevil current curricula used in schools. These problems amongst others are: brain drain which involves the movement of technical and vocational education teachers to other institutions or professions that offers better conditions of service. Training and retention of teachers of TVET are usually not given attention. This situation imparts negatively on the quality of products of TVET. The existing curricula of schools are based on foreign model, most textbooks used have foreign background, curricula being overloaded with academic or intellectual content and inadequate entrepreneurial skill development.

Conclusions

It is impossible at the moment for Nigeria to attain or achieve the much needed economic growth without well-equipped technical and vocational institutions. Expanding the carrying capacity of vocational schools must be carried out with inclusion of TVET taking the lion share of the nation's budgetary allocation. There exists a missing link or gap that ought to be filled before development can be attained in all sector of the economy. That gap or missing link is TVET which had been relegated to the background by Nigerian politicians. The battle and gospel for recognition of TVET must start from the primary school. Pupils or students must be made to understand that owing a small scale agri-business enterprise or being a technician is not inferior to other field of specialization. The need to overhaul the educational system in Nigeria is not going to be complete without rejigging the curriculum of schools.

Recommendations

1. All state government including federal level must ensure that large sum of money is allocated to TVET. Adequate funding of TVET is not negotiable.
2. Teachers of vocational technical education should be adequately remunerated to avoid the current trend of brain drain in the educational sector.
3. Teachers of TVET should be sponsored to attend workshop for training and retraining of changing technology in TVET.

4. Teachers of TVET should be encouraged to publish textbooks that encompass the local background.
5. Government should provide adequate facilities and equipment to all TVET schools in the country.
6. The various regulatory bodies of TVET should organize a national curriculum conference where the curriculum of TVET will be overhauled to make it relevant to the current realities in the country.

References

1. Amadi UPN., *et al.* "Introduction to Vocational technical Education". *The Alphabet Publishers Ltd* (2007):
2. Egbule PE. "Fundamentals and practices of Agricultural Education". *Owerri Totan publishers* (2002):
3. Ekele GE. "The making of Agricultural education: programme evaluation, Competencies & theories". *Makurdi, Selfers publishers* (2018):
4. Ekele GE., *et al.* "Effectiveness of teacher's participatory role in curriculum change of Agricultural Education at tertiary Education level in Benue state, Nigeria". *Nigerian journal of curriculum studies* 24.4 (2017): 160-170.
5. Farauta KG and Amuche CI. "Implementation of Agricultural science curriculum in Taraba school system: Imperative for students' occupational skills acquisition". *Journal of Education and practice* 4.15 (2013): 1-7.
6. Federal Government of Nigeria. "National policy on Education. Abuja NERDC". (2013):
7. Idris A, -. "Implementation of technical and Vocational Education in post primary schools in Nigeria: A Qualitative Approach". *International journal of Humanities and Social science invention* 1.1 (2012): 30-33.
8. Odu OK. "Philosophical and sociological overview of Vocational and technical Education in Nigeria". *American-Eurasian journal of scientific research* 6.1 (2011): 52-57.
9. Ojimba DP. "Vocational and Technical Education in Nigeria: Issues, problems, prospects and Dimensions". *Journal of Education and Social Research* 2.9 (2012): 2-6.
10. Okoye R and Arimonu MO. "Technical and Vocational Education in Nigeria: Issues, challenges and a way forward". *Journal of education and practice* 7.3 (2016): 113-118.
11. Olaitan SO and Ali A. "The making of a curriculum (Theory, Process, Product and Evaluation). Onitsha, Cape publishers". (1997):
12. Olunloyo VOS. "The challenges of globalization for the design of technical curriculum in developing countries. 1st edition. University of Lagos press". (2002):
13. Omekwe IC. "Issues and problems in implementing of Vocational Education Programmes in Nigeria". *Joja educational research & publishers* (2009):
14. Osam I. "Implementing Vocational and technical Education programme in South –South Nigeria: A case of Rivers State". *International journal of scientific research in Education* 6.2 (2013): 128-148.
15. Ovbiagele AO. "Evaluation of Vocational Education in Nigeria. A Review of the roles of the regulatory bodies". *Global Journal of Interdisciplinary Social Sciences* 4.3 (2015): 16-21.
16. Thompson JF. "Foundation of vocational Education. New York. Prentice-Hall". (2002):

Submit your next manuscript to Scientia Ricerca Open Access and benefit from:

- Prompt and fair double blinded peer review from experts
- Fast and efficient online submission
- Timely updates about your manuscript status
- Sharing Option: Social Networking Enabled
- Open access: articles available free online
- Global attainment for your research

Submit your manuscript at:

<https://scientiaricerca.com/submit-manuscript.php>