

Educational Futurism: A Case for the Teaching of Agricultural Education to Youths in Nigeria

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ABSTRACT One of the general aims of education in a country is the preparation of the youths (new recruits of the society) for effective future living in a changing society without loss of those aspects of the culture that have been time cherished. This is usually achieved through the school system with a well articulated and designed package of learning experiences that transcend varied cultures that interact with one another. Nations look into the future with saintly resolve of achieving a good system that is able to produce and train nationals that are able to meet the demands of the future and not lagging behind in a competitive world. The achievement of set goals on what education should be in the future demands a clear vision of the future. This involves total commitment of both material and financial resources to the educative process. Agriculture has been the main stay of Nigerian economy and will continue to do so for a long time to come as it continues to employ good percentage of the population both at peasant and commercial levels of production. This necessitates a good vision of the future and design of curriculum package that is able to reduce shock of food shortage and raw materials for agro-based industries and create a frame of mind that is devoid of cultural superstition and beliefs; and a curriculum that will accommodate different agricultural practices, recognizing different cultural practices and international character of knowledge. This paper recommends a change in method of instruction, effective, funding, a curriculum of affect and equal opportunity for male and female members of the society to participate in agricultural activities and national sustainable agricultural policy.

INTRODUCTION

The concept of education has been viewed from various disciplinary perspectives. To the social scientists, education is seen as the process of preparing the individual to adjust to varying situations of interacting with other members of the society in the exchange of goods and services; allocation of scarce resources and wise use of his potentials in the society he finds himself. On the other hand, the scientist sees education as a process of preparing the individual to be able to interpret his environment rationally and be able to adjust and adapt to technological and scientific changes in finding solutions to the society's problems in an ever changing environment. To the teacher, education is a process of bringing the new societal recruit as a result of birth or residence to embrace the social decorum and practices in the society for self enhancement. It is in this perspective that Igborgbor (2000) operationally described education as the acquisition of needed competencies for life in the society. He concluded that such competencies should spread through the cognitive, affective and psychomotor domains and that cognitive competence should include:

- i. Knowledge of certain facts either directly or

indirectly useable in particular situations.

- ii. A deeper understanding of phenomena in ones environment which affects the individuals' attitude and ability to deal with such phenomena.
- iii. An enhanced reasoning ability which leads to a better understanding of situations. This enables the individual to be analytical and systematic in problem solving, decision making and choice from different options; such a person develops a constructively critical mind.
- iv. Creativity: The art of devising and implementing new and better ways of doing things and thus contributing to the development of society.

A common feature of both perspective views of education, is that education prepares the individual for tomorrow's living and ultimate survival. It is this need for continuous survival and ability to adapt to changes that have remained a permanent feature of human society that has pushed man into those activities that will enable him adjust to unexpected changes in his environment. The concern about the future has occupied the mind of man as he either by omission or commission has conquered or

departed from the past with a reasonable knowledge level of the present. Man has always to some extent created the future; the future being to a large extent the product of man-made change. What is being enjoyed today is a product of yesterday's activities whether positively or negatively. Today's science and wisdom are needed ingredients in the decision making process which can carry man towards socially desirable goals of the future especially in the aspect of food production. Thus attempts are made by man to equip the off-springs for future living. All these attempts put in a package constitutes education. The aims of education have varied with cultures and times. Consequently, the educational philosophies of Perennialism, Existentialism, Realism and Idealism have existed (Kneller 1971). Idealism as an educational philosophy has leaning with conceived or projected idea of the future.

The basic tenets of educational futurism as put forward by Toffler (1974): is that:

The future is the domain into which a man has projected and in which he now contemplates; the possible he wishes to make real, the image that is and will be, as long as it subsist in the mind, the determining reason or his actions"

The implication is that all education spring from images of the future and all education create images of the future. He concluded that if the images of the future held by a society are grossly inaccurate, its system of education will betray its youths. As an off-shoot of idealism, educational futurism can be described as a deliberate attempt to move into the future in a systematic manner, with ultimate aims of reducing shock resulting from changes. Kauffman (1976) asserts that for schools to have any relevance to the needs and demands of society – they must give careful and explicit attention to the question: "What kind of education will best prepare the youths for the world in which they will actually live their adult lives?". It therefore implies that education and its processes given today prepare the individual for tomorrow's living. Peretomode (1993) recognized this when he asserted that all education whether so intended or not, is a preparation for the future.

In all civilization, the youths have been known to play significant role in food production. Their role in Nigeria cannot be over emphasized as they constitute about 50% of the population and would constitute the majority of the people in the

work force, in service jobs, industry and agriculture (National Population Commission 2006). Education as agent of change through persuasive orientation, with the school and information media as out posts on the frontiers of social change and with basic human behaviour usually fixed at an early age; therefore it becomes important that teaching for the future should start from the earliest age as early start makes teaching and learning process a part of the child's culture and helps to dissolve traditional barriers of non-productive attitude and superstition (Oriafo 1985). Approach to futuristic education has at least two dimensions:

1. An image of the kind of world to be sought and the role image of the learning.
2. Perspective of the content and educational conditions that hopefully will prevail.

These two dimensions call for the understanding of the youth for whom education is being planned.

ADOLESCENT OF TODAY

The youths in school have been recognized as agents of change (Ugbomeh 1993) and to effect change in a society, the agent of change must itself change first (Egun 1994). Societal changes have been very swift in recent years. The exposure of parents to various agents and media of educating the youths have influenced the age at which children attend and are retained in school. Consequently activities previously performed by the home in agricultural practices are now transferred to the school (Egun 1999).

At the secondary school level, the ages of the youth range between 11 and 16 years. Many personality characteristics are acquired during this period and a variety of age specific roles must be learned, skills developed and task accomplished. The outlook in agriculture and youth culture styles is much more sophisticated today than a decade ago. Achievements have meant a lot to the youths now than before. In Nigeria, achievement is one of the determining principles of life and to invest one's pride and hope in the promise of realizing one's aspirations has consequently affected choice of occupations.

Therefore an understanding of adolescence requires knowledge of youths consciousness or the personal factors of aspirations, attitudes, beliefs and dispositions that enable young people

to sustain ultimate and lasting social and economic attitudes towards occupations/vocations.

Interest and motivation of the youth is related to his maturation level. Therefore, it is necessary that the physical, cognitive and economic perceptions of the youth be understood.

CHANGING ROLE OF AGRICULTURAL EDUCATION

What could be regarded as Agricultural Education in schools started as Nature Study in the primary schools, and has since gone through different names such as Gardening, Rural Science and Agricultural Science (Egun 1984). Training in Agriculture at post secondary level did not commence effectively till 1954 (Fafunwa 1974), when Nigeria College of Arts, Science and Technology was officially opened in Ibadan. From 1954, government made efforts aimed at attracting the youths into agriculture not only in training but also in the provision of incentives in terms of higher salaries and better living conditions; coupled with persistent propaganda about the importance of agriculture to the Nation (Western Nigerian Government, 1961).

The National Curriculum Conference of September 1969 gave the first impetus to the orientation of School Agricultural Curriculum. It gave birth to the National Policy on Education 1981 (revised 2004); which has attracted the attention of both the federal and state governments; thus making Agricultural Science both as a compulsory and examinable subject in the Senior Secondary Certificate and General Certificate Education Examinations. It is hoped that schools will produce people who will take to farming as their occupation after completing schools. National Policy on Education (2004) has the following objectives as it affects the teaching and learning of Agricultural Science:

1. To stimulate and sustain students interest in Agriculture.
2. To enable students acquire basic knowledge and practical skills in Agriculture.
3. To prepare students for occupation in Agriculture.
4. To prepare students for further studies in Agriculture.

The changing world phenomena towards technology need to be spread to farmers. There is need to educate farmers who can apply the modern farming techniques, modern farm

equipment and chemicals to improve production. A useful agricultural education for the Nigerian citizenry should have as a target the total well being of the people. Agricultural education is needed to explain new technology to farmers and teach them how to adapt and adopt improved production practices in order to increase their production and income. Traditionally, the agricultural educationist is a teacher and is confined to the classroom having been pedagogically prepared for the role. Today, he is expected to change job, function as farm manager, and as entrepreneur of large farms and other related business efforts. Based on this premise, agricultural educational should centre on the following:

1. Goal setting
2. Programming
3. Disseminating of Agricultural information, and
4. Training.

A goal is a future endeavour aimed to be achieved through consistent directional framework (Ibikunle 1993). The probable role of agricultural education have been identified (Olaitan 1984). In addition it should ensure that farmers are continually exposed to attractive production options through the youths. It should bring research results and new agricultural techniques to farmers through the youths in school and adults at home that are already engaged in farming. Meeting the agricultural needs of adult farmers will no doubt increase the volume of food production as they constitute the greater member of the farming population though at small holder subsistent level of practice (Obi 2005).

The need to train individuals in vocational agricultural education is increasingly becoming imperative. Nigeria is urbanizing at an alarming rate reducing available land space for farming via road construction, industrialization and housing. There is need to acquire and train the youths in urban agriculture (Egun 2007) that will ensure steady and increase supply of food and some needed raw materials for industries. This could be achieved through supervised home project.

Curricular Implication of Educational Futurism to Teaching and Learning of Agricultural Education

Wheeler (1967) expressed curriculum as the planned experience offered to the learner under

the guidance of the school. Gagne (1974) sees curriculum as a sequence of content units arranged in such a way that the learning of each unit may be accomplished as a single act provided the capabilities described by specific prior units have already been learned by the learner. Obayan (1985) sees curriculum both as a package and a process; that an individual receiving the package and going through the process has no end to his education as he would have:

- 1 Acquired some skills which are useful for continuous self development.
- 2 Broadened his horizon in such a way the he is able to see beyond his nose;
- 3 Built up on his initial knowledge, in addition to modifying his initial attitude and value and;
- 4 Acquired appropriate learning skills to enable him be a learning animal.

Agricultural science as a core-course in the school curriculum should be forward looking. It should no longer be concerned with the transmission of basic culture of yam and cassava cultivation and the free-range keeping of domestic animals. The curriculum should be such that graduates of schools are equipped with saleable skills not only in the traditional culture of agricultural practices but in other spheres of human and financial management. School agricultural programme should be opened, child centred in approach and more flexible (Vannier and Forster 1963); thus enabling the child/learner to be educated rather than passing through a school system (Obayan 1985). The curriculum should be that which will enhance the adoption of agriculture as a rewarding occupation by the youths and enable them adjust to rural living as Rucker (1960) has posited that the majority of children must eventually return to the land. Etuk (1991) recognized this when he recommended home project and off-farm agricultural occupation experience for both teacher trainee and students of agriculture. This could be achieved through upgrading of Teacher Industrial Work Experience Scheme (TIWES) and Student Industrial Work Experience Scheme (SIWES)

The Content of Agricultural Science in School

The curriculum should embrace the activities and practices of other cultures bearing in mind the changing world phenomena in food consumption in terms of quality, quantity, type and forms; arising from increase in population ,

famine, economic crunch, resource depletion and close cultural ties, resulting from interactions among individuals of different nationalities and international character of knowledge.

Futurizing education implies that the learner will begin to sense and accept both the constraints, advantages of freedom and emphasize the inelucitable fact that education will increase rather than decrease inequality. It calls for preparation without indoctrination, the extensive use of inquiry as method of instruction and development of open mindedness. This means a total change from the current rote learning and lecture methods of instruction towards that which allows the child/learner to explore the environment and interpret it as he sees and feels and be able to integrate various learning's into a comprehensive whole; as futuristic education recognizes and increases inequality among individuals. The use of methods which recognizes the various differences and capabilities in learning ability of individuals should be encouraged. The use of project and individualized teaching methods could be of useful effect in teaching for futuristic education. The project method involves learning in total study. The project to be studied is defined, explained to the learner and allowed to practice and progress in the required learning experience under the guidance of the teacher. Essentially, this method propagates the idea of John Dewey (Kneller 1971) on knowledge acquisition and skill development. The project method advocates learners being assisted as the needs arise to reach the desired goal; otherwise left alone and his performance evaluated. This learning imperative option has the following advantages:

- i. It makes for the use of learners initiative since he is sparingly assisted.
- ii. Learning is made interesting as the learner is faced with real life tasks to tackle. This increases experience and enhances problem solving ability. Interest is increased as learners see the result of their efforts; thus motivation is sustained. Projects carried out in group form enhance co-operation amongst learners as they contribute individually to the success of the project. This also assists in the formation of co-operatives societies.

Quality Assurance in Futuristic Education

Quality has been variously defined (Ojerinde 1997; Ubrevbu 2005). To ensure effective and

functional education for the citizenry, all agents linked with education need total attention; but there has always been poor funding in developing countries which Nigeria is not an exception (Uba 2005).

Today people patronize private institutions on the assumption that public schools are not performing to standard. There are now many ways of knowing and assessing the achievement of set goals. The various ways must be qualitatively and quantitatively arranged to ensure total quality in education. Total Quality Management (TQM) is a concept introduced into education from business. The concept of Total Quality Management (TQM) remains traceable to Edward Deming an American statistician. Essentially, this management theory (TQM) focuses on customer satisfaction, employee empowerment and product quality. The basic cardinals of TQM are:

1. That the customers are vital to the operation of the organization as they ensure business continuity since without business no organization. Therefore, it is the primary duty of any group to keep customers satisfied with quality products.
2. That management needs to listen to non-traditional sources of information in order to institute quality.

The theory of Total Quality Management (TQM) rest on work place and allocates changes which managers have to settle if improvement is to be achieved in the system. In the main, the theory holds to customer relationship (student), employee empowerment (teacher), creation of enabling environment (infrastructure) that promote unity and change; and continuous gathering and use of statistical data.

Achieving Quality in Futuristic Education

The achievement of a quality set goals on what education should be in the future demands a clear vision of the future. This involves total commitment of both material and financial resources to educative processes. Documented evidence exist of the cherished ideals or goals which education should achieve (National Policy on Education, NPE 2004) stating –

- i. Production of highly motivated and efficient classroom teachers for all levels of the education system.
- ii. Encouragement of the spirit of enquiry and creativity in the teachers.

- iii. Help teachers to fit into school life of the community and the society at large and enhance their commitment to national goals.
- iv. Provide the teacher with the intellectual and professional background, adequate for the assignment and make them adjust to changing situations.
- v. Enhance teacher commitment to teaching profession.

Laudable as the above may seem, nothing can be achieved if adequate measure of financial, human and material resources are not committed to the course. To achieve the goals, the government should ensure:

- a. That only the teachers with relevant qualification are employed in the education system. The implication is that government needs to invest in teacher preparation as the current teacher-pupil ration is 1:1000 (Uba 2007). More teacher institution need to be built and existing ones expanded and upgraded to produce high calibre of teachers.
- b. That the current teachers handling the various levels of education are exposed to current trends in both subject matter content and administrative management styles. This implies sending the existing teachers on course both local and outside the country especially in vocational and skill oriented jobs.
- c. That the curriculum of teacher training incorporates entrepreneurial skills which will help them teach course that will generate employment after leaving school. This will help to reduce unemployment and increase poverty alleviation of the federal government agenda.
- d. That the planned curriculum is religiously implemented. Inclusively, the teacher trainee should be taught the keeping of essential school records; such as the school attendance register, punishment (blackbook), staff movement book and continuous assessment and time table production skills.

Finally, there is the need for learning in education law. This will provide background to teachers' roles and limitations as they act as local parents in the school system.

Challenges of Educational Futurism

1. Curriculum Content: The curriculum of futuristic education constitutes one of the greatest challenges in a nation's educational system. A perpetuation of relevant current content of the curriculum must be sustained and issues/contents of other cultures that have

developed and influencing world culture must be incorporated. This is the perennial philosophy of man and education. Perennialism as philosophy of education (Kneller 1971) hold to the universality of men hence education should be same for everybody. Curriculum design for futuristic education should be an amalgam of subject base and integrated approach. The subject matter approach to curriculum design hold to the traditional nitty gritty of learning,; while on the other hand, the integrated approach see curriculum design as a package designed to harness the important parts of different subject matters. This type of curriculum advocates the inclusion of ideas in a curriculum package even if the ideas canvassed are not prevalent in the area. Essentially, the curriculum integrated approach subscribes to the philosophy of idealism (Kneller 1971) holding that education is preparation for future living.

2. Funding: School (centre of learning) environment requires a lot of infrastructure that are needed for effective learning. These infrastructures include building, chairs, and tables for teachers, documentation - school register, record books – diary and staff movement books. These require money which must be provided at the needed time.

Agriculture is a vocational course; and more money will be needed to provide tractors, simple farm tools and other farm inputs for the training of the youth or new societal recruits. Currently, the percentage of national budget allotted to education is far below the 26 per cent recommended by UNESCO.

3. Attitudinal Change: Skinner (1961) explained attitude as ideas with emotional content, important beliefs, prejudice, biases, predispositions, appreciations and a state of readiness or set. Attitude according to Benjamin (1986) is an individual predisposition or tendencies to reach in certain ways towards objects, creatures, individuals, institution, races, religion or practices.

Uti and Sunday (1993) reported that students' attitude towards the vocational subjects and agriculture in particular has been negative; expressed in not participating in practical lessons. Several works (Obi 1981; Abdulahi 1982; Agwuibike and Egun 1996) have identified the various causes of this phenomenon hence there is need for curriculum of Affect. Affective curriculum should be that which would influence the heart and bring about change in the manner

that teachers and learners are influenced positively to the course of national goals. Currently, teachers and farmers are seen as individuals who have failed in other field of life (Agwubuike and Egun 1996). In entirety, the heart is to be educated. According to Igborgbor (2006), the education of the heart includes all measures taken to assist the individual to develop values, attitudes and behaviours that are personally enhancing and positively productive for both the individual and society.

4. Home Influence: In many families, especially homes where farming has been the main occupations parents tend to discourage their children from taking measures that will find them in farming as their occupation. Farming and agriculture in general are discussed as occupation for failures in other human endeavour and school drop-outs. This assertion was corroborated by Olaitan (1984) and concluded by Agwubuike and Egun (1996) when they said that the impressions are transferred to the school and expressed as truancy during practical lessons in agriculture. Cultural practices are not out of influence in balancing male/female ratio in school. The gap/imbalance between male and female arose from a lot of cultural practices in society resulting from deeply fixed prejudices, attitudes, customs behavioural decision and procedures coming to discriminate against women's right and access to education.

Discoveries in science and technology bring about new ways of doing things that are useful if they are adopted and adapted by the greater majority of the people. The changing world phenomena towards technology need to be spread to the entire population. Girls and Women constitute about 49 percent of Nigeria's total population (National Population Commission, 2006). Unfortunately, 61 percent of the population are illiterates as against 37.7 percent illiterate male population (NPC, 2006). This needs to be addressed. The importance of female education is best expressed in the World Bank (1996) Cost-Benefit Analysis report which indicates that investment in the education of the females has the highest rate of return than any possible type of investment.

5. Method of School Assessment: Assessment in school is based on written examination. A method in which the learner is meant to respond to a series of gestures from which his/her total being can be inferred. The concept of examination is as old as mankind dating back to Adam and

Eve with the forbidden fruit in the garden of Eden. Okoye (1986) defined examination as organized assessment technique which presents the individual with a series of question or tasks geared towards ascertaining the individual acquired skills and knowledge – content and ability to utilize this knowledge and acquired skills effectively.

The purpose of examination could be:

- a. To diagnose and ascertain what the pupil or examiner knows or does not know.
- b. To predict the examinees success or otherwise in a higher level of education.
- c. To motivate the learner
- d. For placement or classification of learner
- e. For selection purposes.

Currently, the assessment of learners is on written examination at the end of a semester or term as may be applied to the institution. This system has been variously criticized (Falayajo 1986; Yoloye 1988; Emeke 1996) principally for deficiency in assessing the affective and manipulative aspect of knowledge, more so that the system neglects the dimensional growth and development of the individual especially at the early stage of the learner. The consequence is the development of emotions of love and hatred. These are interpersonal feelings which have influenced interest in the mathematical sciences (Agwubuike and Egun 1996) a phenomenon which is capable of retarding launch into the world of science and technology.

Therefore, there is the need to evolve an assessment method which will be a combination of various test result that will portray actual profile of the learner and make for appropriate academic and entrepreneurial judgment. This may be found in continuous assessment as put forward by Glacier (1962); bearing in mind that changing circumstances demand changing educational responses.

CONCLUSION

Futuristic education entails a projection of what education will help individuals to achieve in future. It attempts to predict the future living from a knowledge of the past and present. Agriculture and its various practices have been going through changes and is expected to change in the future especially with increase in technological and scientific knowledge.

Evaluation of learning process and achievement by use of written examination on group of

learners should be avoided. Rather a progressive assessment technique which will be able to provide a comparative data on the basis of the individuals current state and point of programme entry; as to determining and interpreting whatever changes that has taken place over time. The technique may find place in competency based assessment by Glasier (1962) and encompassed in a curriculum of Affect which will not only affect the individual perception of the world around him, but bring about attitudinal change, off-setting of unnecessary cultural beliefs, home influence as it affects choice of course of study and the girl child discrimination in access to education.

RECOMMENDATION

As futuristic education is based on the image of the future and individuals perceptions, school curriculum in agriculture should be that of affect. Affective curriculum of education is a programme of activities that will be utilized to influence the learners' values, attitudes, emotions, interests and dispositions in desired directions. It is therefore recommended that:

- i. School agricultural science programme should be flexible to allow easy entry and budding off into various areas of agricultural practices.
- ii. Methods of teaching should be such that learners have the opportunity of continuing their learning's outside the school. The methods should as much as possible enhance positive transfer of knowledge by relating theoretical ideals to practical reality.
- iii. The use of projects should be encouraged in schools as it enables the learner to face challenges and bring initiatives to bear.
- iv. There is need for effective preparation of teachers of agriculture since they lie between curriculum and learners. Their role has since been recognized.
- v. Field trips should be encouraged in schools. This will expose learner's to agricultural practices in different places bearing in mind the international character of knowledge more so when the developments in science and technology have reduced the world to a global village.

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