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## CURRICULUM DEVELOPMENT AND IMPLEMENTATION: CHALLENGES FACING THE IMAGE OF AGRICULTURE IN SCHOOLS

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### Abstract

*The teaching of Agriculture in primary and secondary schools in Nigeria educational system is handled by both trained and untrained teachers. As long as agriculture revolves around man in totality, the issue of trained professionals to handle the subject at all formal educational levels becomes inevitable for the good image, effective curriculum delivery, and the transmission of values and norms to the younger generations. This study was carried out to determine the Challenges of Image of Agriculture in Schools and the implications on future curriculum development and implementation in South-Western Nigeria. One research question of 15 questionnaire items guided the study. Thirty (30) students each from six Junior Secondary Schools all totaling 180 students and 72 non-agricultural science teachers randomly selected from the Junior Secondary Schools in Ogun State of Nigeria formed the sample of the study. Data collected were analysed using frequency and mean. Some of the findings are that - Agriculture to the respondents is an energy sapping, very tedious school subject, agriculture involves drudgery in which one puts in much and gets little or nothing in return, the respondents strongly believed that agriculture is synonymous with farming, that agriculture wastes much of the student's time on the school time table including their leisure hours, and, that agriculture is not easily divorced from the school punishment because of defective curriculum delivery. Recommendations like the need for the introduction of the use of machinery on the farm to reduce drudgery, reduction of the time of period for practical lessons, better enlightenment on agriculture and farming to students, total avoidance of the use of school farm for punishment ground, and, the strengthening of curriculum development and effective delivery were made.*

**Key words:** Challenges, image, curriculum development, curriculum delivery, norms, drudgery etc.

### Introduction

In the rural areas of Nigeria, pre-school and early childhood education through traditional means have been a particularly appealing intervention by which parents on one hand and the teachers on the other have encouraged their wards to participate in domestic subsistence agriculture. The teaching of agriculture at the primary and secondary school levels of our educational system is a mixture of both trained and untrained teachers who, through their interest or added responsibility, find themselves in the classrooms and on the farms.

The new 9-year basic education curriculum makes Agriculture a subject under the pre-vocational studies from basic four. The opportunities to know a little about Agriculture in the early years is

from parents through day-to-day interaction with their wards. These parents have enormous opportunities to help develop the skills, habits and training expected of an average child regarding Agricultural activities. These basic trainings in farm activities though prominent in the rural areas are scarcely present in the highly urbanized settings in the country. The wards may not necessarily be active participants, but as they watch their parents carry out some tasks, such may develop their interests in agriculture.

Though agriculture as a subject is not taught at pre-primary education level, yet the FRN (1989) clearly states among the purposes that it should "inculcate in the child the spirit of enquiry and creativity through the exploration of nature, the environment, art, music and playing with toys, etc;". A critical look at this gives prominent roles to parents and siblings at home on how this could be achieved. They may not necessarily be actors but onlookers with the expectation that their interest in agriculture will be developed later in life.

The economic recession of 80's and 90's propelled government to launch various programmes and policies aimed at boosting the image of agriculture. In realization of the role that the youths of this nation can play towards the achievement of our national goal and aspiration of self sufficiency and self reliance in food production, the government makes Agriculture as one of the core subjects as clearly indicated in section 15 sub-section 6 and section 18 sub-section 6 of the document (FRN, 1989). Of most concern is the present lukewarm attitude of students towards Agriculture in schools which ultimately affects their future careers in life (Alademerin, 1996). To the youths, farming is a profession for the school drop-outs and never-do-well in the society. A way of coping with the challenges of the poor image of agriculture is to create awareness and interest in our youths through a meaningful childhood education programme. The task of giving effective expression to the values and ideas of meaningful school agriculture is in the curriculum and the careful implementation by the teachers. The cooperation of government agencies saddled with the tasks of education, their support and, above all, the understanding and the commitment to the educational values and ideas together constitute the most important prerequisites for a society that is committed to agricultural revolution.

This has not really helped matters as students regular basis develop negative image of the subject and in some instances hatred for the teacher who in most cases doubles as the labour master as well. When such punishments are concluded, erring students hardly get convinced that the purpose of the punishment was reformatory. They hold a strong view of their being used 'as labourers for productive purposes' on the farm just for the teachers to make more money. Obayan (2003) pointed out that every human society devotes a considerable amount of time and energy to transmitting its cultural heritage which are of considerable value to its younger generation. Nigeria is typically an agrarian nation considering the fact that generations from our fore fathers eke out a living by tilling the soil, tending plants and rearing animals. This goes to support the inclusion of agriculture as a core subject in the UBE scheme. Section 15 sub section (b) and Section 19 sub section (b) of the National Policy on Education (1989) asserts the importance of inclusion of agriculture in the school curriculum.

An agrarian society involves the active participation of all in the various sectors of the economy that has roots in agriculture. The orientation of such a society through their own efforts will lead to gradual empowerment of both individuals and the society which is central to the basic concept of

agricultural revolution. This is in line with Article 6 of Education for All (1990) which states "Learning does not take place in isolation. Societies, therefore, must ensure that all learners receive the nutrition, health care, and general physical and emotional support they need in order to participate actively in and benefit from their education".

Certain day-to-day practices and school characteristics of some Agricultural science teachers may have affected the image of the subject they are positioned to teach. The teaching of Agriculture in the Universal Basic Education (UBE) scheme must influence progressive change in all cultural contexts which can only be best achieved through the effective curriculum delivery by the professional teachers. The school, as a social institution for education has a capacity and needs to facilitate, promote and possibly guide certain forms of value required for the overall success of the UBE scheme for our national development.

Effective curriculum delivery in agriculture is measured in terms of the acquisition of knowledge taught in the classroom, as well as the demonstration of clearly defined learning outcomes.

Outside the classroom situation effective curriculum delivery is directed at the following:

- i. creative thinking and mastery regarding farm activities;
- ii. entrepreneurial skills and managerial abilities of on and off farm activities;
- iii. risk taking activities;
- iv. display of professional values and ethics;
- v. farm and rural minded; and the
- vi. ability to transmit and impart knowledge to others.

The Federal Republic of Nigeria (1989) clearly defines Early childhood/Pre-primary education "as the one given in an educational institution to children prior to their entering the primary school. It includes the crèche, the nursery and the kindergarten". The document goes further to state that "The responsibilities of government for pre-primary education shall be to promote the training of qualified pre-primary school teachers in adequate number, contribute to the development of suitable curriculum, supervise and control the quality of such institutions, and establish pre-primary sections in existing ones". The purpose of pre-primary education shall be to:-

- a. effect smooth transition from the home to the school;
- b. prepare the child for the primary level of education;
- c. provide adequate care and supervision for the children while their parents are at work (on the farms, in the markets, offices, etc);
- d. inculcate social norms;
- e. inculcate in the child the spirit of enquiry and creativity through the exploration of nature, the environment, art, music and playing with toys, etc;
- f. develop a sense of co-operation team-spirit;
- g. learn good habits, especially good health habits; and
- h. teach the rudiments of numbers, letters, colours shape, forms, etc, through play.

The above components of effective curriculum delivery can only be achieved when the educational objectives are sequential. Objectives are measurable statements or parameters which are supposed to be attained at the end of a normal period or lesson of agriculture in the school. They should have the attributes of the three domain – cognitive, affective and psychomotor. Objectives can be performance or behavioural in nature. With the introduction of the Advanced Teachers' Colleges

(ATTCs) in the 60's as recommended by the Ashby Commission on Higher Education, agriculture was for the first time recognised by the educational administrators as a teachable subject in the secondary schools. Since that time and until when the 6-3-3-4 system of education was introduced, agriculture has been taught as part of general education without any production bias. There was no emphasis on any particular skill or attitudes. It was taught as a science subject with emphasis on laboratory analysis and recognition of agricultural products.

Approaches in the present day educational learning experience give regard to serious labour work (Psychomotor skills development - Practical agriculture) in the educational training of the youths. Considering the youths "apathy to agriculture", a variety of educational learning experience that will interest the youths are also embedded in the curriculum. Vocational Agricultural programme represents the one of best agents for effective social and economic change in Agriculture in the country and it is necessary to continue to activate the various potentials in it by encouraging the youths into the productive areas.

This can be best achieved by creating awareness and interest in agriculture and its broad fields early enough in the life of the youths through active participation in Young Farmers Club activities from their schooling years. This is a kind of orientation that is geared towards maximum food production for the country. It is pertinent to note that when utilized appropriately the YFC can improve the teaching and learning of agriculture in our School system by creating and arousing Youths interest which could ultimately lead to Vocational skills acquisition and development in them. The YFC is seen as a rallying point for the success in including the right attitudes towards agriculture among the youths through participatory approaches.

YFC can improve teaching and learning of agriculture and also arouse youths interest in the school subject through various activities - engagement in the productive ventures in agriculture, trips and excursions to agricultural establishments, farmers shows etc. Through active participation in YFC activities, youths can acquire vocational skills in - Vegetable crops production, poultry production, arable crops production, crops processing, fish production etc.

Presently, the lukewarm attitude of teachers and students to Agriculture is a matter of great concern. It is undoubtful that most students on completion of their secondary education prefer to work as labourers or casual workers in manufacturing industries rather than go into farming. This is as a result of the various perception of the students on Agriculture. One of this is their regard for farming as a low remunerable and undignified profession for someone without special skill or training. The inclusion in the basic curriculum at the primary school will help improve the image and the wrong misconceptions of the students about the subject.

#### Research Methods and Procedure:

The purpose of the study was to determine the challenges of the image of agriculture in schools and the implications on future curriculum development and implementation. The study was conducted with the use of questionnaire to determine the students and teachers opinions on the research question. Cronbach Alpha reliability method was used to test for the internal consistency and this was 0.86. The study was carried-out in six (6) Junior Secondary Schools in two local government areas in Ogun State of Nigeria systematic random sampling was used to get 72 teachers and 180 students involved in the study. Data collected by the researcher were analysed using frequency, mean and percentages. A mean of 2.50 and above was taken to mean agreement and a mean below 2.50 was taken to mean disagreement.

**Analysis of Data**

The overall data collected for this study are presented below.

What are the challenges facing the image of agriculture as perceived by the students and non-agricultural science teachers?

S/N	Challenges	N1	N2	fx1	fx2	x1	x2	Remarks
1	It is always considered an energy sapping and very tedious school subject.	180	72	515	198	2.86	2.75	Agree
2	It involves much drudgery and students put in much and get little or nothing in return	180	72	558	216	3.1	3.00	Agree
3	It consumes most of the students hours of working on the school farm	180	72	551	213	3.06	2.96	Agree
4	It is to train and motivate in farm only through excursion and trips	180	72	564	163	3.13	2.27	Variation
5	It is a money making venture in the school and of very low prestige value in the society	180	72	551	230	3.03	3.19	Agree
6	It does not actually involve real practicals of agriculture as the teaching is devoid of teaching/instructional aids.	180	72	393	207	2.18	2.88	Variation
7	It involves engagement of the students on farms by the school authority mainly to rake in money for school use.	180	72	539	212	2.99	2.94	Agree
8	It is largely influenced by the neighbouring environment of the student	180	72	560	217	3.11	3.01	Agree
9	It is to train students the art of marketing farm produce advantageously to the public only	180	72	429	168	2.38	2.33	Disagree
10	It is too practical oriented with the use of crude implements – cutlasses, hoes, etc	180	72	558	209	3.1	2.90	Variation
11	Teaching methods of teachers consumes too much time on the school time table.	180	72	553	220	3.07	3.06	Agree
12	It is to train on field only and to expose students for industrial work experience	180	72	555	167	3.08	2.32	Variation
13	It is not really a science subject as the school laboratory is not well equipped like Physics, chemistry and biology	180	72	393	210	2.18	2.92	Variation
14	It is more of farm work and makes students look untidy and rough after the practicals on the school farm	180	72	531	211	2.95	2.93	Agree
15	It is concerned mainly with the production of farm products and not proper and effective teaching of students	180	72	429	206	2.28	2.86	Variation

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Keys:	N1	=	No. of students used for the study
	N2	=	No. of teachers used for the study
	Fx1	=	Total scores of responses obtained by students used
	Fx2	=	Total scores of responses obtained by teachers used
	X1	=	Mean of students
	X2	=	Mean of teachers

In table 1 above, there are fifteen (15) items and each item is a variable and a matter that positively or negatively affect the image of agriculture by the students and non-agricultural science teachers in Junior Secondary Schools.

**Findings and discussions**

The following results were got from the analysed data;

1. The image of agric education by students and non-agricultural science teachers are based on the fact that:
  - a. It involves much drudgery and students put in much and get little or nothing in return.
  - b. It consumes most of the students leisure hours of working on the farm.
  - c. It is a money making venture in the school and of very low prestige value in the society.
  - d. It involves engaging the students on farms by the school authority mainly to rake in money for the school's use.
  - e. It is largely influenced by the neighbouring environment
  - f. It consumes too much time on the school time table
  - g. It is more of a farm work and makes students look untidy and rough after the practicals on the school farm.

It is quite obvious from the data analysed and the findings established that the image of agriculture by the respondents is very poor. Agricultural education is negatively and poorly perceived. The ideal teaching aid, the regular trips and excursion to agricultural establishments were found to influence the image of agriculture at the secondary school level. Also, the various methods used by teachers of Agriculture were also found to have influence on the respondents' image of Agriculture. The environment which includes the home, the school, the peer group among others were also found to be a strong factor in the image of Agriculture by students and teachers.

There is a strong belief that the proper way to fulfill the different needs of individual is to offer them opportunities for a wide range of experiences by taking them out to places where Agriculture is practiced intensively and let them see things for themselves. Such trips enable students to obtain information directly and study real life situations, and, develop critical thinking and broaden the horizons of pupils as they see people work in different activities.

Poor methods of teaching of Agriculture were also found to influence the respondents' perception of agriculture education in the secondary schools. In support of this, Comenius (1972) quoting Aristotle, wrote "*Mihil intellectu quod non fuit prius in sensu*" which literally means "*there is nothing in knowledge which has not first passed through the senses*". This goes to show that for agriculture to enjoy a good image, the teaching methods must be well improved upon to appeal to all senses of the students, especially that of sight.

**Implications on future curriculum development and implementation:**

For education pursuits, as any other pursuit in the field of human endeavour, quality is a sine qua non. Quality in this context refers to teaching qualifications, teaching methods and techniques as well as general exposures of the teachers. In meeting up the minimum standard of quality, the Nigerian Certificate in Education (NCE) is the minimum teaching qualification in our primary schools (FRN, 1977; 1981; 1989).

In curriculum development and implementation, teachers or instructors are arguably crucial. It is through thoroughly bred and qualified teachers of agriculture that the students and the society at large can benefit immeasurably. The teaching of the subject at the secondary school level must be made interesting and realistic to appease to all the student's senses. Since it has something to do with the manipulative skills. Thus if school agriculture is to play any useful role in the training of future farmers in the society, then such school programme in agriculture should aim at producing either skilled or semi-skilled youths that will impact positively on the society's food production efforts. The poor image of agriculture in schools is not peculiar to Nigeria and developing countries but a phenomenon that is worldwide even in the developed Nations. According to the Los Angeles Times, Agriculture schools in California and throughout the nation are hoping fresh slogans will cultivate interest among high school graduates who don't know wheat from Wheaties. The same universities that a generation ago churned out legions of Agriculture professionals a generation ago are today largely struggling to woo students. Many students who are studying agriculture are clamouring for cheese class and wine-making seminars, shunning traditional fields such as soil science and crop production. Even the Midwestern states have felt the pinch.

"Behind every farmer in the field, there's a whole line of merchants and scientists that support that farmer," said Fred Roth, a professor of plant pathology at Cal Poly Pomona. "But we're aging out, and there isn't a group of people coming up to take our places." University administrators peg the problem to agriculture's outdated "cows and plows" public image. Urbanization of many of California's historic farming plains has slashed the ranks of high school graduates exposed to horticulture or husbandry. Many colleges have changed their names to broaden their appeal, de-emphasizing agriculture and tacking on terms such as "environmental sciences" or "natural resources."

In June, Iowa State University officials broke with nearly 50 years of tradition and added "life sciences" to their agriculture school's name — a move designed to attract more students after enrollment dipped from 2,807 in 2001 to 2,448 in 2005. Even the flagship organization of youth in agriculture, the Future Farmers of America, dropped the word "farmers" in 1988, preferring instead to be known as the National FFA Organization. Other universities have hired marketing firms to boost their profiles. [www.latimes.com/news/local/la-me-farm29sep29,0,89632.story](http://www.latimes.com/news/local/la-me-farm29sep29,0,89632.story)

The zeal and interest with which youths take agriculture have drastically declined over the years and this affects the growth and development of agricultural and allied fields. As reported by the United States Department of Agriculture (1998), five major challenges face the U.S. agricultural industry in the next decade: (1) maintaining an agricultural system that's highly competitive in the global economy, (2) balancing Agricultural production and the environment, (3) providing a safe and secure food supply for all citizens, (4) maintaining a healthy, well-rounded population, and (5) increasing the number of people entering the field, economic opportunities and improving the

quality of life for all Americans. Although the numbers of American farms have declined over the years, American farmers still provide enough food for the American people and much of the world. On average, American consumers spend just 10 percent of their disposable income for food, which is lower than any other national in the world (American Farm Bureau, 2002).

To sustain agriculture at its current status, recruitment of outstanding individuals must be enhanced. To enhance recruitment, more effective recruitment strategies must be implemented. To develop effective recruitment strategies, it is necessary to research students' decision making processes and their images of agriculture (Lucas, 1993).

**Four "V" Model and agriculture in Nigeria.**

The Four "V" Model originally put forth by Grace (1999) has been re-modified to explain how to build ethical orientation leadership and attitude between the government and the governed including youths and students in all areas of human endeavours including agriculture. The "Vs" stand for Values, Vision, Voice and Virtues.

**Value:** deals with what is considered clean, good, right as against what is evil, bad, wrong etc. It explains in totality the premium placed on an action – the need for us as a nation to feed ourselves.

**Vision:** A long term plan on a future programme which will bring a purposeful change and impact positively on the lives of people in an area. It is time bound.

**Voice:** A way of giving proper mobilisation and orientation to people on a programme that will be of immense benefits and also the dissemination of same to the target audience. May be likened to government efforts in areas of Operation Feed the Nation, Better Life Programme, National Economic Empowerment Development Scheme, State Economic Empowerment Development Scheme, National Poverty Eradication Programme etc. to women, youths, farmers etc.

**Virtue:** It is the good everyone in the society and the society itself stands for. It is driven by sincerity of purpose and truth. It is the totality of the norms and mores in the society which should help shape and polish our various ways of life in relation to productive ventures in farm activities – poultry production, parables crop production, vegetable production, fish production, etc.

Fig. The Modified Four "V" Model



Alademerin (2006).

In relating the model to agriculture, the ultimate is the value of agriculture to the larger society – in areas of provision of food, shelter, employment opportunities, domestic and industrial raw materials, livestock feeds etc. The linkage between the Four "V" is the force of mobilisation of the entire citizenry. The process of mobilisation at each stage will focus on ways and means of sensitizing Nigeria's labour force (including youths) to generate greater productivity so as to ensure economic recovery and self-reliance. Gana (1987) once asserted:

*"We are convinced that the way forward is through effective and popular mobilisation of Nigeria's productive forces. If we succeed in mobilising the creative energies of our people for greater production, we would have laid a solid foundation for economic recovery. The missing link has been effective mechanism for mobilising our labour force to transform our abundant natural resources into goods and services".*

The vision explains a long term government agricultural programmes (ADP, DRFFI, BLP, NAPEP etc.) that will ultimately be of immense benefit to the society. Through government agencies, religious bodies, NGOs etc. the benefits inherent in the programmes are passed onto the society through various media.

In maximising the benefits, laws, discipline, dedication, obedience etc. regarding the mode of operations of the programmes are spelt out to avoid one running foul of the guiding principles. The values got are not immediate as they take years or even decades to manifest in societies. The youths constitute the largest percentage of the workforce in all countries of the World and for this reason, their educational programmes deserve utmost care and attention since the future of a nation lies with them. From the beginning of creation; agriculture has been and continues to be man's cardinal vocation to subdue and replenish the earth and has since become the life wire of man.

A veritable venue for advancing agriculture in secondary schools and among the youths is through the establishment of youth clubs and societies so that they can ginger up their interest into Agricultural occupations. This goes in line with a quotation from the Holy bible in the book of Proverbs chapter 22 verse 6 "train up a child in the way he should go and when he is old, he will not depart from it". It is strongly believed that an early age education with the ultimate aim of critical engagement of pupils in sustainable development particularly in nature related subject as agriculture will make them develop positive attitude and could also help to offer new forms of life support to ever growing population.

#### Recommendations

- The various stakeholders in education should impress it more on government to make the schools curricula more relevant to the needs of the people without neglecting the values and traditions of our people.
- Communities and educational institutions should be encouraged to develop interests and educational initiatives that will create attitudinal change to the teaching of agriculture at all levels.
- The development initiatives of various states and national governments in African continent should consider the indigenous people in the local communities so that educational interventions will be more meaningful to them.
- Governments and stakeholders at all tiers in all countries should assist in identifying what needs to be done to achieve sustainable change which benefits ALL in the educational sector particularly in the development of curricula. There should be coherence between different development and implementing agencies to serve as potentials for delivering progress towards our vision.
- Ensuring more functional school curricula – such include the introduction of core vocational education courses at all tiers of the school system and creating room for entrepreneurial skills development in and out of school situations. This will encourage graduates to be job creators and not job seekers. This will reduce dependence and craze for white collar jobs.

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