

KNOWLEDGE REVIEW

Volume 35 No. 1, December, 2016



Published by National Association for the Advancement of Knowledge

ISSN 1595-2126



TOWARDS TRANSFORMATION OF EFFECTIVE TEACHING AND LEARNING OF AGRICULTURE/AGRICULTURAL EDUCATION IN HIGHER INSTITUTIONS IN NIGERIA: ISSUES, CHALLENGES AND THE WAY FORWARD

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In our contemporary society, higher education is more or less meaningless without the acquisition of vocational skills. Efforts of teachers and curriculum planners should gear towards injecting the spirit of entrepreneurship in every learner despite the discipline. Currently, educational attainment is incomplete without reflection of skill acquisition even in core vocational subjects (Ekpo, 2001). The lecture method has been the dominant technique of instruction in higher institutions. It is the responsibilities of both the teachers and curriculum developers to inculcate the principles and practice of vocationalism in individual even from the early stage of pre-secondary education.

Agriculture and agricultural Education teachers could not meet the intended outcomes of teacher education for now. They must be effective in their teaching and above all make learning effective thus pursuing and acquiring quality education. Sesay (2014) opined that a good quality education is multicultural in nature. This means that education that will enable its graduates to acquire the knowledge, manipulative skills and conducive behaviours to earn a decent living and be able to live a productive, selfless and peaceful life as a contributing and patriotic member of the society.

The transformation of multicultural education in Agriculture lies in the teaching and learning effectiveness, teacher integrity, policies, available job opportunities in the society, the will of the parents and all the partners in education for Nigerian children. According to Nwokolo and Iwua (2015), sources of educational objectives include the learners, society, nature of the subject and psychology. Learning opportunities should be playful, suitable and skillful to effect the life of the society by making the learners responsible, progressive and productive citizens (Ekpo, 2001). It is senseless, wasteful, unproductive, and retrogressive for free education currently operating in some states in Nigeria without effective teaching and learning.

Right to children education in Nigeria should basically address the type of teacher education. It means what quality of education is the right of Nigerian children? It is the education of procuring certificates without element of productivity in the society? Who is the teacher to transform the expected teacher education to our children? Who are the learners to response to the transformation of education in higher institutions? What roles should the government play to ensure the transformation?

The teachers, learners and government of Nigeria should have vision, be committed, be dedicated and determined towards the transformation of effective teaching and learning in our higher institutions. The Agricultural education teachers in particular must be of high quality and affection, sound in content knowledge pedagogy, skillful in practice, professional ethics and high personal integrity.

The sound intention to produce active, effective and productive learners through effective teaching is aimed at solving the hanging unemployment problem in African states. Iredia and Idogho (2014) pointed out that as many as 50%, a third of the active labour force (Asante, 2011) and 80% of graduates (Adejimola and Olufunmilayo, 2011) in Ghana, South Africa and Nigeria respectively find it difficult to acquire employment annually. This could be attributed to ineffective teaching of entrepreneurial skills in vocational subjects resulting in lack of basic skills and competencies required for job creation and self employment.

It is on this premise that this paper is presented with the following objectives

- (i) To highlight the concepts of Agricultural education, effective teaching and learning.
- (ii) Challenges of Agriculture and Agricultural education in Nigeria
- (iii) Current issues and expected roles of government to transform Agriculture through effective teaching and learning.
- (iv) Suggest the way forward for achieving transformation of Agriculture and Agricultural education through effective teaching and learning.

Concept of Agriculture and Agricultural Education

Agriculture deals with art and science of producing food for man, feeds for animals, fibre, raw materials for industries and also involved the processing, storage and marketing of agricultural produce. Agricultural Education is concerned with the sum total of academic activities that prepares the students mainly for occupations requiring manipulative skills. It is regarded as the educational process which involves the study of agriculture, in addition to producing competent teachers. It aims at skill acquisition and self employment in different facets of Agriculture, attitude, ability and knowledge necessary for food security of a nation. For an Agricultural Education teacher to be effective he should be very conversant with the following objectives of agricultural education according to NCCE (2012).

- To equip teachers with the right attitudes and professional competence in vocation agriculture.
- To produce competence teachers capable of motivating students, interest in Agriculture
- To provide adequate knowledge to the teachers in terms of managing a model school farm effectively.
- To provide a sound background to student-teachers in order to enhance further academics pursuit in vocational skills.
- To minimize dependency and a search for white collar job.
- To increase food production and raw materials for industrial progress.

From the aforementioned objectives, effective teaching and learning serve as a gateway to achieving the desired goals and objectives.

Concept of Teaching and Effective Learning

Teaching is a process of rendering assistance to a learner to acquire knowledge (Osinem, 2008). It is an instruction and a specialized communication in a logical manner. It is associated with observable activities including teaching method, instructional materials, learners' and teacher's activities, classroom environment and management, the teacher's personality and evaluation of the learning outcomes indeed; teaching is an instruction to modify the behaviour as a result of experiences. No lesson, no activity or skills can be taught until it is learnt. It cannot be learnt until it is understandable.

Effective teacher is one who learns from teaching by adopting learner's oriented centred-teaching-approach. The role of teacher education is to develop the capacity to acquire sensitively and systematically into the nature of learning and the effect of teaching.

Anon (2014) presented the characteristics of an effective teacher as follows

- Mastering of the subject. The teacher should not only master the subject but impact same on the learners
- Fluency and flexibility: The teacher should be communication friendly. He should be able to present the ideas in various understandable ways to the learners.
- Originality and Vision: A lecturer should create relevant ideas and have a strong desire for self-actualization.
- Pleasant personality: This deals with good human relationship. A lecturer sees himself as a teacher and a teacher should have a good rapport with the learners if effective teaching must take place.
- Effective Methodology/Techniques: A good teacher should be conversant with relevant techniques and methods of teaching through in-service programmes.

Concept of Learning and Effective Learning: Transformation Strategies

Learning is an active process which involves the development of many important skills not just remembering the facts delivered by a teacher. For learning in higher institutions of learning to be effective and enhance transformation of Agriculture/Agricultural education the following guidelines could serve as a compass for the learners.

- Create interest and entrepreneurial spirit for the subjects or courses without reservation.
- Ensure that repetition of careful reading of academic materials should form a permanent reading culture.
- Always know that early preparation prevents poor performance and skillful acquisition

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- Bear in mind that class attendance, attention and participation are remarkable experience in the learning process
- Create mutual and cordial relationship with teachers and colleagues in case of "holly assistance".
- Think accurately and apply the learning to life situations.
- Be an independent scholar and assume to be a teacher for every lesson taught.
- See beyond passing examinations and ask yourself questions for instance where is the skill acquisition in me? Will I satisfy my employer? Can I serve as an employer of labour?
- Develop study skills by getting information from wider sources.

Current Issues in the Teaching of Agriculture in Higher Institutions

So far efforts are made by Nigerian governments at state and federal level to provide convenient learning and basic skills for agricultural training but the aim is not achieved because the effort is inadequate coupled with corruption tendencies by school managers.

The National Science curriculum for secondary schools had recommended that each student be guaranteed adequate equipment, farm space, farm structure and regular supply of fertilizer and animal feeds as well as keeping atleast two farm animals (FGN, 2014). In our schools these recommendations are not implemented. Furthermore, the National Universities Commission (NUC) had introduced a one year compulsory field work into curriculum of undergraduates of Agriculture in Nigerian universities. In colleges of education, students are allowed to proceed on mandatory Students Industrial Work Experience Scheme (SIWES) for sixteen weeks.

At present, student's internship is haphazardly supervised because of poor funding and conscious negligence of supervisors. Moreover, posting of students to their primary assignment is not commensurated with the aim of the programme. Special attention is not given to the supervisors for encouragement and motivation. Other issues prevalent in our educational system as they affect teaching of Agriculture include:

- Poor attention to Agricultural lecturers and the subordinate staff.
- Decline participation of agricultural learners in practical work is alarming and this is a reflection of food insecurity in Nigeria (Uko, 2013).
- So many clouded programmes in Colleges of Education make the mandatory internship of agricultural students difficult to maintain the prescribed period.

Originally, Government established higher institutions of learning to meet the manpower of the nation. Osinem (2008) reported that the mission of early educational institutions was to scientifically study agriculture with the participation of the farming communities, to carry the results to a broad range of farmers who could use them and to train farmers, extension workers, agricultural science teachers and researchers so that agricultural production could continue to be increased on a sustainable basis. To him, agricultural training has failed to adapt and respond to those realities. Curricula and teaching methods and tools used have not been relevant to the development objectives of our nation or to the needs of farmers and labour market in general.

The whole idea of Agricultural graduates was to be employed by the government. Today, economic crisis of a nation demands that graduates should be self employed and create job for the masses. The orientation now seems to be in the opposite direction. The graduates may lack rudiments of practical skill needed in the labour market, hence cannot employ himself nor others. For the transformation to be effective then both teaching and learning must be effective. Considering the issues at hand, government should gear efforts towards improving teacher education and agricultural training as follows:

- Agricultural Lecturers should be motivated through adequate training, remuneration and hazard allowances to attract the youths to take up agriculture as a profession and to ensure the safety landed of Agricultural programmes in the nation.
- So far, there is a gross inadequacy in terms of instructional materials for teaching and learning. These instructional materials range from physical structures, tools, equipment and particularly farm machinery. How many Agricultural graduates have ever seen and used fertilizer spreader, seed drill, cereal thresher, seed grader, disc plough and harrow, tractor mounted sprayer, theodolite, stereoscope, prismatic compass, rotary planters, motorized sprayers, silos, rhombus, rice huller, castrators post mortem kit and so many to mention. How then can effective teaching and

learning take place? Government that owns the establishment has indirectly abandoned the source of nations wisdom and that is education.

- At present there is no special consideration for Agricultural undergraduates for accommodation on campus, throughout the five years programme.
- Provision of enabling environment for Agricultural lecturers nearest to the institutions becomes necessary.
- Employment of subordinate staff to enhance the practical teaching is also necessary. Presently, acute shortage of subordinate staff is regrettable.

Challenges of Agriculture and Agricultural Education

Actually, it is wrong to say that Agriculture in Nigeria is scientifically progressing downward. It is equally unfair to draw conclusion that Agricultural education is not sensitive for changes and innovations. Osinem (2008) reported that the pace of change is much faster today. Ofcourse, Agriculture and Agricultural education cannot meet the global satisfaction in food processing, storage, marketing and mechanization. The attitude of youths to Agriculture and Agricultural education poses a serious threat in the sector.

The annual intake of students into Agricultural Education Department in Colleges of Education across the country is in an acute decline. One may likely feel that similar set-back is obtainable in universities. Both the ambition of the youths and their parents has almost excluded Agriculture in their life-agenda. Nearly all brilliant students in sciences want to become doctors, engineers and pharmacists. This could be attributed to the marginalization of agriculture and agricultural education by government of all levels and managers of schools. Osinem (2008) quoted Maguire (2000) and stated the problems of Agriculture and Agricultural Education as follows:

- Isolation of the Agricultural Universities from other parts of the university system.
- Lack of communication with the employers of the graduates of the university and labour market.
- Poor practical skills among graduates.
- Decreased funding as urban focus gathers strength.
- Weak connection with other parts of the agricultural education system-colleges, vocational, farmer training networks.
- High unemployment of agricultural graduates.
- Failure to attract the best quality students from secondary school.
- Shift in focus from Agriculture to rural developments, biotechnology, urbanization and information technology.

From the above challenges, the actual goals and objectives cannot be accomplished. The silent issues stand out to be given a second thought. These are poor practical skills among agricultural graduates and unemployment.

Skill acquisition is a forerunner of employment opportunities whereas effective teaching creates skill acquisition and entrepreneurial spirits in the learners. The most important problem of teaching agriculture is the fact that after five years B.Sc Agricultural programme plus one year post graduate Diploma in education no incentive is attached to the holders of these certificates even at the point of employment to take up teaching job.

The Way Forward to Transform Agriculture and Agricultural Education in Higher Institutions in Nigeria through Effective Teaching and Learning

For a lecturer to be effective in the teaching of Agricultural Education, the promotion of the learning activities should be paramount. The following involvement and commitment will serve as catalysts for the transformation of Agriculture and Agricultural education in Nigeria.

- Teaching should be accompanied with the use of variety of suitable instructional materials.
- Teaching should be practical oriented.
- Use of suitable teaching methods and the learners should be properly involved in relevant activities. Lecture method is not a guaranteed for an effective teaching.
- Involve in effective planning because planning stage is an indicator of a successful class. Planning here refers to the sum total of all activities towards achieving a particular goal.

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- Develop and implement teaching techniques with consonant with the needs of each learner vis-a-vis the readiness and capability for purpose of clarity.
- Be conversant with flexibility of communication to avoid ambiguity and give room for achieving the intended outcomes.
- Adopting planned repetition by emphasizing on difficult concepts of the lesson for the interest of below average and average learners.
- Motivation of learners through verbal or action encouragement.
- Illustrations, citing or presenting relevant and familiar examples while teaching are also necessary.
- A lecturer should be able to integrate relevant and current issues and practices into his lessons.
- A lecturer should have teaching satisfaction and express affection for the learners in every lesson administered to them.
- Logical presentation of a lesson. A lesson is likely to be taught logically when it is prepared logically. The teacher should correlate same to the understanding of the learners.
- Lesson should have Value: Any lesson accompanied with values is likely to be entrepreneurship-oriented. This means it is rewarding to the society.
- Effective Field Trip: It is true that students of Agriculture and Agricultural Education embark on field trips over the years. The action plan for most of the trips is not marked out. Sometimes the planning and arrangement for the trip is jeopardized because of finance.
- Effective Internship: The present internship lacks effective supervision and relevant training facilities. Owners of agricultural businesses are not cooperating with home institutions, hence effective learning suffers.

Conclusion

Transformation of Agriculture and Agricultural education through effective teaching and learning is only feasible through the acquisition of knowledge, skills competencies, capabilities and abilities on the part of lecturers and readiness on the part of the learners. The effective teaching is to be enhanced by the provision of relevant instructional materials and strict supervision of practical skills.

Recommendations

In the transformation of Agriculture, effective teaching and learning in higher institutions could be realized through the following recommendations.

- Teaching should be student centred-approach. Lecture method should not be the dominant method of instructions. Effective practical skills should be encouraged.
- Strict supervision by school Managers becomes necessary.
- Provision of relevant facilities for teaching is also necessary.
- Enabling environment should be provided for Agricultural Lecturers and undergraduates to enable them achieve the practical reality.
- Generally, Agriculture and Agricultural education should be given the right position in the budgetary allocation at the Federal and state levels. This would encourage training and retraining of staff, adequate employment of staff and provision of instructional materials.
- Information and communication technology should be intensified in the teaching and learning of Agriculture.
- Employment of staff into educational system should base on cognitive and psychomotor domains. No satisfactory practical skills in agriculture no employment.

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