

**ENHANCING HUMAN CAPITAL DEVELOPMENT THROUGH EFFECTIVE
UTILIZATION OF INSTRUCTIONAL MATERIALS ON THE TEACHING AND
LEARNING OF AGRICULTURAL SCIENCE IN THE IN EZEAGU LOCAL
GOVERNMENT AREA OF ENUGU STATE, NIGERIA**

by

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Abstract

This study focused on improving human capital development in Nigeria through the utilization of instructional materials on the teaching and learning of Agricultural Science among the senior secondary school students in Ezeagu local government area of Enugu state Nigeria. The population of the study comprised of 45 Agricultural science teachers and 6466 senior Secondary School Students from the public secondary schools in Ezeagu Local Government Area of Enugu State. The sample size of the study was 240 secondary school students. In sampling the schools, five schools were randomly sampled from the twenty nine secondary schools in Ezeagu Local Government Area of Enugu State. Tables and arithmetic mean were used to analyse the data collected for the study. The major instrument used in data collection was the questionnaire. The results showed that the grand mean obtained from the research question one and two were 2.78, 2.92. The researcher discovered amongst others, that instructional materials yield positive responses when employed in the teaching and learning of agricultural science. From the foregoing, the researcher concludes that government of every tier, education managers, teachers, students, and general public should help in making instructional material available to schools in Nigeria.

Key words: Human Capital, Development, Effective, Utilization, Instructional Materials, Teaching, Learning.

Introduction

Agricultural science is the study of plants and animals for the benefits of man. It is a broad subject that cuts across different

spheres of the society. Theory and evidence show that agricultural science is strategic to national development, particularly for developing countries. "For instance, food is a basic necessity for life, and man needs it for

survival. Every nation attempts to address the prevalent issue of food security. Hence, agricultural activities provide the basic source of livelihood upon which rural life depends, providing food and income for sustenance” (Attah, 2008). In Nigeria, like other developing countries, “the agricultural sector’s role transcends the classical functions of providing food, raw materials, employment and incomes to much more transformative and phenomenal role in a modernizing economy” (Eboh, 2011).

Agricultural science is being taught in the Nigerian schools from primary one to senior secondary three as a compulsory subject. However, in Nigeria, one of the major problems facing agricultural sector today is that agricultural science is not usually well taught in our foundational schools. And prominent among the deficiencies in the teaching and learning of agricultural science in Nigerian secondary schools are inadequacy and in some cases non-existence of instructional materials necessary for effective teaching and learning of the subject. Secondary school teachers have few materials on the teaching of agricultural science to work with. Teaching of agricultural science includes theory and practical. Thus, most things that needed to be practicalized after learning the theory aspect of it should be experimented upon. Any content that deserves demonstration should be demonstrated for better understanding, if it is suppose to be seen let it be seen, if it is to be touched, let it be touched. For example, audio-visual media, projectors, filmstrips, pictures etc for the teaching of agricultural science are either not available, or are insufficient in quantity and quality, or what is available is usually inappropriate in basically most secondary schools in Nigeria.

Over the years, the poor performance of students in public examinations has been blamed on the wrong choice of teaching methods by teachers. Teaching and learning

activities have a lot to do with other variables, such as instructional materials, teacher’s qualification, school environment, and students’ factors and so on. However, inappropriate use of instructional materials ranks high amongst the factors that hinders students’ performance in public examination among the secondary school students in Nigeria. This is because experience has shown that spoken morals alone in the communication of lesson ideas are grossly ineffective and inefficient in producing learning outcome.

Consequently, WAEC (2018), announced that only 1,937 out of 11,307 representing 17.13 percent of the candidates that sat for the January/February series of West African Senior Secondary certificate Examination (WASSCE) have five credits including English and mathematics. The performance of the candidates in the same category in 2017 was 26.01 percent. Comparing the results with the previous editions of the examinations, it is safe to say that the performance is not satisfactory. Available data on the performance of students in agricultural science in May/June WASSCE 2008, 2009, and 2010 showed that 44.1, 46.41, and 47.25 percents of students that sat for the examination passed agricultural science at credit level and above in 2008, 2009, and 2010 respectively. These were not satisfactory as the performances fall below 50 percent mark. Shortage of qualified teachers, inadequate training, lack and improper utilization of instructional materials amongst others are the factors that often lead to poor performance of secondary school students in public examinations, and thus this research work intends to study the utilization of instructional materials in the teaching and learning of agricultural science in Secondary Schools in Ezeagu Local Government Area of Enugu State.

Relevance of Instructional Materials in Human Capital Development

The relationship between instructional materials and educational development involves a two-way reflexive interaction. Effective utilization of instructional materials influences educational advancement, while the level of educational advancement in turn encourages the proper utilization of instructional materials. However, some studies have shown that whenever instructional materials are not properly utilized, it negatively affects the educational system.

The importance of instructional materials in any teaching/learning process cannot be over emphasized. Onyia (2015), opined that “instructional material is the life of every teaching and learning process. Any teaching without instructional material is useless, for it cannot achieve an objective and, cannot promote interest and cannot motivate learners. For a teaching process to be effective and efficient, the teaching must be accompanied with instructional material which will facilitate learning and affect the three domains of learning; the cognitive, affective and psychomotor. Thus, instructional material keeps the students busy and active, and thereby measuring their level of participation in the lesson. The use of instructional material stimulates learners’ interest, sensitizes the learners, facilitates learning, and aids in building confidence on the teacher”.

The use of instructional material makes learning more interesting and active in every learning situation, thereby contributing much in effecting the expected change in the learner’s behaviour. In a more explicit manner, the instructional material assists the teacher for better explanation of learning content. It makes teaching more reasonable and facilitates understanding. Thus, effective utilization of instructional materials in teaching process bridges the communication

gap between teacher and learner during instructions.

In essence, instructional materials are potent weapons in the hands of teachers in terms of driving home his/her point, in the teaching and learning process. Anigbo (2017), opined that ‘instructional materials are essential and significant tool needed for teaching and learning of school subjects to promote teachers efficiency and improve students’ performance. They make learning more interesting, practical, realistic and appealing. They also enable both the teachers and student to participant actively and effectively in lesson session. Instructional materials give room for acquisition of skill and knowledge and development of self confidence and self actualization’.

Kochher (2010), submitted that instructional materials are very significant learning and teaching tools. Instructional materials are objects or devices that assist the teachers to present their lessons logically and sequentially to the learners. Instructional materials are the devices developed or acquired to assist or facilitate teachers in transmitting an organized knowledge, skills and attitudes to the learners within an instructional situation (Nwachukwu, 2010).

To be precise, instructional materials are educational resources used for illustrating the content of instruction, thereby making learning more concrete and less abstract. The instructional materials under discussion are projected and non-projected needs, visual and audio visual materials. These equipment are very useful for teaching and learning. Other instructional materials according to Onyia (2015), are Radiograph, flannel board, text books, board rule, bulletin board, chalkboard, pictures, comics, number whirl, magnetic board, duster, cartoon, charts, models, mockups, drawings, slide etc.

Instructional Materials in Teaching and Learning of Agricultural Science

Because Agriculture is a natural science, many classroom activities that can be used to make the subject come alive for students include stimulations, role play, active demonstration, field trips, practical farm activities, group problem solving and so on. Active learning will both enrich instruction and facilitates students understanding. Agricultural science instructions can come alive to students when they see it in action. Thus, the use of instructional materials is central to the teaching of agricultural science simply because it is an applied subject and it cannot be taught is abstract. Basically, all the topics in Agricultural science require one form of instructional materials either in physical or pictorial forms ranging from farm tools, farm mechanization equipment, plants, animals, seedlings and other farm inputs like different kinds of manure, fertilizers, soils etc. The need to involve the learner through the use of various instructional materials cannot be overlook as it brings about meaningful instruction.

Consequently, it is not enough for a would be teacher of agricultural science to be well grounded in the mastery of the subject matter, but his ability to transfer such to the cognitive level of the learner. The National Policy on Education (2004) emphasizes the teaching of agriculture in Nigerian primary and secondary schools as it is linked to the philosophy of education aimed at inculcating national consciousness and unity, inculcating the right type of attitude for the survival of the individual and the Nigerian society.

Methodology

The study was carried out in Ezeagu Local Government Area of Enugu State, Nigeria. The population of the study comprised of 45 Agricultural science teachers and 6466 Secondary School Students from Ezeagu Local Government Area of Enugu State (Enugu State Post Primary School Management Board, 2018). The population was gotten from twenty nine (29) public Secondary Schools in Ezeagu Local Government Area of Enugu State. The sample size of the study is 240 secondary school students. In sampling the schools, five schools were randomly sampled from the twenty nine secondary schools in Ezeagu Local Government Area of Enugu State. This was obtained by simple random sampling technique. Five schools were sampled out of the twenty nine secondary schools. Forty eight students each were sampled from five of the secondary schools. The researcher distributed two hundred and forty (240) research questions. The responses were collected and the mean responses of each respondent were calculated based on the likert rating scale of 4,3,2,1 of the responses. In analyzing the data in this project, the mean distribution tables were used by the researcher to present and analyze the research questions.

The mean was determined thus:

$$X = \frac{4+3+2+1}{4} = 2.50$$

Decision Rule

The decision rule was that any item above 2.50 was positive to the study while any item below 2.50 was adjudged negative to the study.

Data Presentation and Analysis

Research question one: How do teachers of Agricultural science make use of instructional materials in Ezeagu Local Government Area?

S/N	ITEM	SA	A	D	SD	N	FX	X	Decision
1	Agricultural Science Teachers often over-look using instructional materials.	96	87	21	36	240	723	3.01	Agreed
2	Most Agricultural Science teachers believe that Agricultural Science can still be understood theoretically	99	94	23	24	240	748	3.12	Agreed
3	Teachers only use instructional materials when they are explaining concepts students have not heard before	78	81	45	36	240	681	2.84	Agreed
4	Teachers use instructional materials often	21	30	110	79	240	473	1.97	Disagreed
5	Teachers see instructional materials as what should be used most in pure sciences	77	98	43	22	240	710	2.95	Agreed
Grand Means								2.78	Agreed

Source: Authors field survey, 2018.

From the table above, the item number 1,2,3 and 5 with mean value of 3.01, 3.12, 2.84 and 2.95 respectively were accepted, while item number 4 with mean value of

1.97 was rejected. The grand mean of 2.78 indicated that the items are positive to the study.

Research Question Two: How adequate are the materials in terms of quantity and quality in Secondary schools in Ezeagu Local Government Area?

S/N	Item	SA	A	D	SD	N	FX	X	Decision
1	Government do not provide the needed quantity of instructional materials	120	89	15	16	240	793	3.30	Agreed
2	Available instructional materials are not equal per individual	132	81	17	10	240	815	3.40	Agreed
3	Most schools don't have enough instructional materials to use	92	89	51	8	240	745	3.10	Agreed
4	Instructional materials are not lacking in schools	-	3	11	12	240	356	1.48	Disagreed
5	Teachers often don't use instructional materials because they are not available for use	121	84	22	13	240	793	3.30	Agreed
GRAND MEAN								2.92	Agreed

Source: Authors field survey, 2018.

From the table above, the computed mean value ranges from 1.48 to 3.40 which indicated that most of the respondents agreed that the items therein are positive to the study. the item numbers 1,2,3, and 5 with the mean value of 3.30, 3.40, 3.10 and 3.30 respectively have the respondents agreeing that government do not provide the needed quantity of Agricultural science instructional material to schools. On the other hand, respondents with the computed mean value of 1.48 disagreed with the above assertions. However, the grand mean of 2.92 indicated that the responses of the respondents have positive correlation to the study.

Summary of Findings

The researcher discovered that the use instructional materials in the teaching and learning of Agricultural science in the secondary schools in Ezeagu Local government Area of Enugu state yield positive response from students. The researcher also discovered that government do not provide the needed quantity of instructional material needed for effective teaching and learning of Agricultural science in the secondary schools in the study area, and thus the available instructional materials for the teaching of the subject are not equal per individual in secondary schools in the study area. Again, the finding also revealed

that most of the secondary schools in the study area don't have enough instructional materials to teach the subject, and that Agricultural science teachers often don't use instructional materials in the teaching of the subject because they are not available for use. The researcher also discovered that teachers often over-look using instructional materials as most of them believe that Agricultural science can still be understood theoretically.

Conclusions and Recommendations

Based on the findings, the following conclusions/recommendations are drawn:

Teachers should be encouraged to always use instructional materials in the teaching and learning situation, Educational curriculum Planners should incorporate mass use of instructional materials in their curricula, Government should finance the educational sector by providing the needed instructional materials that will aid learning, educational managers like the vice chancellors, rectors, provosts, principals, headmasters should make sure that instructional material is always available for effective teaching and learning in their schools, Teachers should resort to improvisation whenever the instructional materials needed is not readily available, students should be encouraged to improvise or buy instructional materials that are necessary for their studies both at school and home, the general public like the International development agencies, corporate organizations, NGOs, philanthropists, Parents Teachers Associatins, host communities amongst other should be helping in the provision of instructional materials in the school system.

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