

Professional Competencies Needed By Beginning Teacher Educators in Agricultural Education for Effective Job Performance in Imo State

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Abstract: The study focussed on professional competencies needed by beginning teacher educators in agricultural education for effective job performance in Imo State. Four research questions guided the study. Descriptive survey research design was adopted. The study was conducted in Imo state. The population was 50 made up of lecturers from 2 tertiary institutions in Imo State. The population was accessible and manageable therefore the entire population constituted the sample for the study. A thirty six (36) items structured questionnaire was developed from the literature and used for data collection. Three experts validated the instrument. Cronbach alpha reliability method was used in determining the internal consistency of the instrument. A reliability coefficient of .88 was obtained. Data were collected by the researcher with the help of 3 research assistants, all the copies of the questionnaire were retrieved and analysed. The data collected were analysed using mean and improvement needed index to determine the competencies needs of beginning teacher educators in agricultural education. The difference between the needed mean and performance mean i.e. $(XN - XP)$ constituted the gap for which improvement was needed by beginning teacher educator of agricultural education. It was found, that beginning teacher educators of agricultural science need professional competencies in planning instructions, (8 competency items) implementing instructions, (10 competency items) evaluating instructions, (7 competency items) and professional roles and developments (11 competency items). It was therefore recommended that the identified professional competencies educators need be packaged into in-service training programmes to be utilized in training and retraining beginning teacher educators and old ones respectively.

Keywords: Professional competencies, beginning teacher educators, agricultural education and job performance.

INTRODUCTION

Agricultural education is a vocational course taught in Nigerian schools across all levels of education. Agricultural science is an embodiment of numerous, pure and applied sciences including botany, zoology, chemistry, genetics and many others. For the basic agricultural education objectives to be achieved in Nigeria, it is of utmost importance that the teaching and teachers of agriculture especially beginning teachers who are coming in to the profession of teaching newly be given due emphasis, to be sure that they acquire the right professional skills, knowledge, attitude and quality in general. Knowledge, skills and attitude of the labour force towards modern technology play a key role in increasing agricultural production. All the efforts will be fruitless until the quality of the labour force in agriculture and agro-allied industries are improved. Quality of the labour force means updated knowledge; improved skills and changed attitude graduates bring to the job (Muhammed, 1991). The major focus of tertiary agricultural education has been on the production of public sector employees. Also Students of agricultural faculties are all-too-often not there by choice. Frequently they are there by default after failing to enrol for medicine, veterinary science, business studies, and engineering among other popular programmes (Muir-Leresche & Scull-Carvalho, 2006). This has made the duty of teaching these students who clearly do not want to study agriculture education from the start more tedious on the teachers, hence the reason for adequate vetting of the professional competencies of beginning teacher educator of agricultural education to ensure they do not fail on the job, and produce a new generation of agriculturist who are willing to move the agricultural sector forward through active participation in commercial farming and the general agro-allied industry.

All teacher education programs attempt to prepare students to become effective agricultural teachers, who in turn prepare students as agriculturists. Obanewa (1994) saw a teacher as someone who has undergone the necessary and recommended training in a teacher preparatory programme and is charged with the full responsibility of managing the classroom. Olaitan and Mama, (2001) went further stating that, the teacher of agricultural science is educated and as such should exhibit the character of an educated person in all areas of life. The authors went further stating that a teacher must maintain high ethical standard while enjoying good relationship with colleagues and students as well as having absolute self-confident. Young (1990) identified some characteristics of an effective teacher to include the ability to plan and execute lessons, monitor student learning and behaviour, conduct interesting and focused lessons based on a variety of methods, and maintain rapport with students and peers. Suydam (2003) indicated that effective teachers let pupils know they are concerned about their achievement, offer encouragement, involve students through questions and discussion, minimize time wasting, allowing few distractions and interruptions, establish and follow simple, consistent rules, monitor pupils' behaviour carefully, move around the classroom, and give clear directions. Richardson and Arundell (2009) noted that an effective teacher gives a variety of examples, properly plans lessons, is knowledgeable in the subject matter, and knowledgeable of student learning. A teacher of agriculture must complete his preparation for his job and keep abreast of the changes in his work through professional improvement activities. A competent teacher should possess all the character listed above to be able to carry out his teaching duties professionally.

A profession in the opinion of Hornby (2006) is a type of job that needs special training or skills especially one that needs a high level of education; according to the

author, professional involves specified skills that relate to a particular job for the recognition of the individual in a profession. An agricultural teacher educator needs to possess both technical and professional competencies that are required in the teaching profession. These professional skills include; planning of instruction, implementing instruction, evaluating instruction and professional role and development. The responsibility of preparing future effective agriculture teachers resides with teacher educators at universities, colleges of education with agricultural education programs. It is their responsibility to develop coursework and design programs to effectively achieve this outcome. While doing this, teacher educators sometimes might rely on personal experiences since there is little or no research-based information on the characteristics of effective agriculture teachers (Miller, Kahler, & Rheault 2009).

Competencies in the submission of Encarta (2009) is the ability to do something well, measured against a standard, especially ability acquired through training or experience. Also International Labour Organization ILO (2003) opined that competency is the knowledge, capabilities and behaviour which someone exhibits in doing his job and which are factors in achieving the objectives pertinent to the teaching strategies. Competency in the context of this study is the knowledge, skills and attitudes which the teacher of agriculture needs for effective teaching of agricultural science. Whereas all these earmark a competent teacher, there is still the need to possess the special attributes of a professional as regards the roles of specific roles of an agricultural teacher.

In Imo state however, it is well understood that teachers of agricultural science depend mainly on textbooks as their teaching aid and lecture method in imparting instructions to students. Sometimes, the beginning teachers dictate as written in learning material such as Newsletters without interpreting the information to suit the context of discuss and ability of the students. In the view of Olaitan and Mama (2001), this implies that senior secondary school students graduate from school without acquiring the basic competencies that will enable them to fix themselves into the world of work of agriculture and to make a living. Teachers of agricultural science also impart information in agriculture to students in agricultural science by not utilizing the right facilities to be used for skill development while preparing students towards gainful employment in the future. A face to face interaction with teachers of agricultural science in some secondary schools also show that teachers do not possess these professional competencies in agriculture. They are expected to imbibe into students the skills, knowledge and attitude they require to be able to be gainfully employed after they leave school. To teach agricultural science successfully towards achieving the set out objectives of the subject matter, teachers as well as beginning teachers need improvement in their professional competencies. There have been no studies dealing with professional competencies needed by agriculture teachers in Imo state.

Agriculture teachers need training at both the pre-service and in-service levels. This study would help provide Information regarding different competencies needed by teachers and would help universities in the state design agriculture teacher preparation curricula. Such information is also needed for arranging in-service training programs.

STATEMENT OF PROBLEM

In Imo State, lack of professionally trained manpower in agricultural education is one of the major problems facing the agricultural development. Because of uneducated and unskilled

manpower, traditional methods are still used in agricultural activities. This gap can be bridged by making strong the formal and informal agricultural education programs. Secondary school agricultural programs do not just serve to prepare students for higher agricultural education, but should also help equip students with necessary knowledge and skills to enter into agricultural enterprise. Santo (2004) believed that keeping in view the facts and figures, vocational education is important for those who are not able to pursue a college education. According to the author, vocational education is essential in this regard. The author was of the opinion that vocational education is essential to the educational process at the secondary level. At its best, it offers students an important pathway to educational, economic and civic competence. When it is less than it should be, it must be improved, not abandoned, for the potential is there to offer to the young people who need to enter the work force, or who do not thrive under an academic approach to learning. It is, therefore, a necessity to strengthen the agricultural program at the middle and high school level, which is a priority of the Nigerian government.

Okatahi and Welton (2005) pointed that of all aspects of agricultural education and training, the teacher is the most important. Without good teachers, competent in their work and possessing those qualities which enable them to inspire and develop the latent capacities of their students, agricultural education as a whole cannot function effectively. This statement is as valid today as it was when it was initially stated and is relevant to agricultural education. The lack of these competent professionals handling the agricultural education sector in the State has hampered the production of competent agricultural graduates. There seem to be a gap between fresh agricultural educators and the actual competencies required for teaching agriculture, this is evidenced by the fact that young secondary school graduates couldn't demonstrate the skills and have shown little or no interest in embarking into agriculture as a means of sustainable income generation. This study therefore tends to bridge this gap by identifying the professional competencies needed by beginning teacher educators in agricultural education.

PURPOSE OF THE STUDY

The purpose of this study was to identify the professional competencies needed by beginning teacher educators in agricultural education for effective job performance in Imo State. Specifically the study seeks to identify professional competencies needed by beginning teacher educators;

1. in planning of instruction,
2. in implementing instruction,
3. in evaluating instruction and
4. their professional role and development

RESEARCH QUESTIONS

The following research questions were answered for the study

1. What are the professional competencies needed by beginning teacher educators in planning for instructions in agricultural education?
2. What are the professional competencies needed by beginning teacher educators in implementing instructions in agricultural education?
3. What are the professional competencies needed by beginning teacher educator in evaluating instructions in agricultural education?

4. What are the professional competencies needed by beginning teacher educators in their professional roles and developments in agricultural education?

METHODOLOGY

Descriptive survey research design was adopted for this study. The study was carried out in Imo state using a population of 50 lecturers in agriculture education department from 2 tertiary institutions in Imo state, Imo state university and Alvan Ikoku College of education. The population was manageable and therefore the entire population constituted the sample for the study. A thirty-six (36) items structured questionnaire developed from the literature reviewed was used for data collection. The questionnaire was divided into two categories of needed and performance. The needed category was assigned a four point response option of highly needed (HN), averagely needed (AN), slightly needed (SN) and not needed (NN), with a corresponding value of 4,3,2,1 respectively. The performance category was assigned a four point response option of high performance (HP), average performance (AP), low performance (LP) and no performance (NP), also with a corresponding value of 4, 3, 2, and 1 respectively. 3 experts validated the instruments; three of them were from the Department of agricultural Education Imo state university. Their suggestions were used to improve upon the final version of the questionnaire which yielded 36 out of 53 items. Cronbach alpha reliability method was adopted for determining the internal consistency of the instruments. A reliability coefficient of .88 was obtained, this means that the instrument was reliable. 36 copies of the questionnaire were administered to the respondents, through the help of 3 research assistants who were familiar with the area and were trained prior to their assignment. All the 36 copies of the questionnaire were retrieved after an interval of one week and analysed using weighted mean and Improvement Need Index (INI) to answer the research questions. To determine the performance gap of teachers of agricultural science, the following steps were taken.

1. The weighted mean of each item under the needed category XN was calculated.
2. The weighted mean of each item under the performance category XP was also calculated.
3. The difference between the two weighted means for each item (XN-XP) was determined.
 - Where the difference was zero (0) for each item, there was no need for competency improvement because the level at which the item was needed as indicated by the weighted mean was equal to the level at which the teachers perform that particular competency.
 - Where the difference was positive (+) for any item, there was need for competency because the level at which that item was needed was higher than the level at which the teachers perform the competency item.
 - Where the difference was negative (-) for any item there was no need for competency improvement because the level at which the competency item was needed was lower than the level at which the teachers perform the competency item, (Olaitan and Ndomi 2000).

RESULTS AND FINDINGS

The results of the study were obtained from the research questions answered, as shown below:

Research Question 1

What are the professional competencies needed by beginning teacher educators in instructional planning for effective job performance in agricultural education?

Table 1: Performance Gap Analysis of Mean Ratings of the Responses of Teachers on the Professional Competencies in instructional Planning.

S/N	Item Statement	XN	XP	(XN-XP)	Remarks
1.	Identify the topic to be taught during instruction	3.82	2.40	1.42	IN
2.	Determine the objective of the topic of instruction	3.48	2.01	1.47	IN
3.	Identify the materials to be use in the instruction	3.39	3.03	0.36	IN
4.	Select relevant materials for instruction	3.00	2.33	1.77	IN
5.	Develop your lesson	2.99	2.45	0.54	IN
6.	Determine the method of instruction	3.36	2.10	1.26	IN
7	Determine instructional evaluation strategies	3.11	2.60	1.51	IN
8.	Identify records to keep on instruction and evaluation	3.86	2.14	1.72	IN

IN=improvement needed, XN= mean for needed, XP=mean for performance

The data in table one show that the performance gap values of all the eight (8) items ranged from 0.36 – 1.77 and were positive. This performance gap values also reveals that the beginning teacher educators of agricultural education needed competency improvement in all the eight professional competency items in instructional planning for effective job performance.

Research Question 2

What are the professional competencies needed by beginning teacher educators in instructional implementation for effective job performance in agricultural education.

Table 2: Performance Gap Analysis of Mean Ratings of the Responses on the Professional Competencies in Instructional Implementation.

S/N	Item Statement	XN	XP	(XN-XP)	Remarks
1.	Arrange the materials for the lesson in order of use	3.14	2.61	1.53	IN
2.	Introduce the objective of the lesson to the student	3.23	3.00	0.23	IN
3.	Determine students entry behaviour	3.11	2.60	0.51	IN
4.	Introduce the lesson	3.98	3.92	0.06	IN
5.	Deliver the lesson content step by step with appropriate method	3.11	2.20	0.91	IN
6.	Get student involved through activities	3.44	2.23	1.21	IN

7.	Use relevant materials at appropriate time	3.00	2.33	1.77	IN
8.	Organise practical as demanded by the topic either in groups or individually	3.24	2.84	0.40	IN
9.	Supervise students activities	3.36	2.14	1.22	IN
10.	Respond to students questions appropriately.	3.12	2.59	0.53	IN

IN=improvement needed, XN= mean for needed, XP=mean for performance

The data in table two revealed that the performance gap values of all the ten (10) items ranged from 0.06 – 1.77 and were positive. This performance gap values indicated that beginning teacher educators of agricultural education needed competency improvement in all the ten professional competency items in implementing instruction for effective job performance.

Research Question 3

What are the professional competencies needed by beginning teacher educators in instructional evaluation for effective job performance in agricultural education?

Table 3: Performance Gap Analysis of Mean Ratings of the Responses on the Professional Competencies in instructional Evaluation.

S/ N	Item Statement	XN	XP	(XN-XP)	Remarks
1.	Assess students understanding of Instructions	3.44	2.12	1.32	IN
2	Assess students mastery of competence	3.79	1.36	2.43	IN
3	Identify areas of improvement competency practice	3.83	2.17	1.66	IN
4	Determine quality output of student in an instruction	3.58	1.44	2.14	IN
5	Determine progressive growth or upliftment of students	3.23	2.79	0.44	IN
6	Keep students performance record	3.77	2.11	1.66	IN
7	Disseminate knowledge of result	2.98	2.01	0.97	IN

IN=improvement needed, XN= mean for needed, XP=mean for performance

The data in table three revealed that the performance gap values of all the seven (7) items ranged from 0.44 – 2.43 and were all positive. This performance gap values indicated that the teacher educators of agriculture needed competency improvement in all the seven professional competency items in instructional evaluating for effective job performance.

Research question 4

What are the professional competencies needed by beginning teacher educators in their professional roles and developments in agricultural education?

Table 4 Performance Gap Analysis of Mean Ratings of the Responses on the Competencies in professional role and development.

S/N	Item Statement	XN	XP	(XN-XP)	Remarks
1	Work effectively with department heads and/or other administrative personnel	3.88	2.75	1.13	IN
2	Acquire new occupational skills and information needed to keep pace with technological advancement in agriculture	3.78	2.70	1.08	IN
3	Is well organized; has excellent time management skills	3.82	1.62	2.20	IN
4	Maintain the ethical standards expected of a professional educator	3.68	2.72	0.96	IN
5	Exchange observational visits, innovations, and ideas with others in the profession	3.76	2.62	1.14	IN
6	Promote the attainment of the goals of the teaching profession	3.74	2.34	1.40	IN
7	Keep up-to-date through reading professional literature	3.68	2.50	1.18	IN
8	Use research findings regarding effectiveness of teaching methodology	3.70	2.60	1.10	IN
9	Identify current trends of the teaching profession	3.48	2.18	1.30	IN
10	Use the information contained in professional journals and literature in agricultural education	3.44	2.26	1.18	IN
11	Expand educational background and leadership potential by achieving advanced degrees	3.42	2.40	1.02	IN

*IN=improvement needed, XN= mean for needed, XP=mean for performance

The data in table three revealed that the performance gap values of all the seven (7) items ranged from 0.96 – 2.20 and were all positive. This performance gap values indicated that the teacher educators of agriculture needed competency improvement in all the eleven professional competency items in professional roles and development for effective job performance.

DISCUSSIONS OF FINDINGS

The results in table 1 (professional competencies needed by teacher educators in instructional planning) is in line with the findings of young (1990) as reviewed in the literature, he stated that an effective teacher must have the ability to plan and execute lessons, monitor students learning and behaviour, conduct interesting and focussed lesson based on the various teaching methods and maintain rapport with his students and peers.

The result in table 2 (professional competencies needed by professional teacher educators in instructional implementation) concurs with the submission of Richardson and Arundel (2009), here he noted that an effective teacher gives a variety of examples, properly plans lessons, is knowledgeable on the subject matter and students learning, complete preparations for his job and keep abreast of the changes in his work through professional improvement activities.

The result of the study in research question 3 is in keeping with Suydam (2003) who found that beginning teachers need competency improvement in assessing students

understanding of instructions, identifying areas of improvement competency practice, determining progressive growth or upliftment of students, keeping students' performance record, etc.

In Table 4, the result is also in line with the submissions of Luft and Thompson (1995), on professional roles and developments needed of a professional teacher, where he stated that an effective teacher should belong to professional teacher organisations, being self-confident and poised, have strong human relationship and personal attitudes. Producing effective agriculture teachers is the key to the long-term sustainability of agricultural education programs. Ineffective teachers are likely to become dissatisfied with teaching as a career and seek other employment opportunities (Bennett, Iverson, Rohs, Langone, & Edwards, 2002). The results of this study show that, to produce effective teachers the professional qualities identified in this study must either be taught to the students when they enter teacher education programs, or be developed.

CONCLUSION

Based on the findings of the study, it was concluded that beginning agricultural education teachers need professional competency in 36 items. (8 items in instructional planning, 10 items in instructional implementation, 7 items in instructional evaluation, 11 items in professional roles and development) The rejuvenation of the agricultural sector of any country is strongly connected to how strong the country's agricultural education programs are. Teachers of agricultural education can no longer be overlooked, as was the case over the years, so putting up a concise program for teacher educators for the training of future agricultural teachers is a step in the right direction if we are to produce work oriented graduates. One of the very important ways of training new teachers is through the pre-service teaching programs such as teaching practice.

Student teaching is a very important part of the pre-service teaching program. So selecting cooperating teachers, for these upcoming teachers should be done knowing the importance of the roles that awaits the student teachers, so only competent teachers should be made cooperating teachers to these student teachers. According to Edwards and Briers (2001), the characteristics of the cooperating teacher are important for the development of pre-service teachers. Selecting effective teachers to serve as cooperating teachers should aid teacher education program in developing effective teacher. Arguably, the professional competencies identified in this study are all what a teacher can teach.

RECOMMENDATION

Based on the results obtained from the analysis of the study, the researcher therefore recommends that:

1. Agriculture teacher education programs in the study area are evaluated to ensure that these competencies identified are included, as there could serve as a formula for developing effective agriculture teachers.
2. In-service agriculture teacher educators should be retrained based on the findings of this study and similar studies for the benefit of the next generation of agricultural teachers.
3. Pre-service evaluation programs should be organised to access the competency level of would be agricultural education teachers.

4. Additional coursework that emphasizes on the development of personal qualities be made available for pre-service teachers

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