



Professional improvement needs of agricultural education lecturers for quality instructional delivery in universities in Rivers state

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Abstract

The study investigated the professional improvement needs of agricultural education lecturers for quality instructional delivery in Universities. Three research questions were answered by the study while three null hypotheses were formulated and tested at 0.05 level of significance. Descriptive survey research design was adopted. The study was carried out in three Universities in Obio/Akpor local Government Area of Rivers State. The population of the study was 31 lecturers, consisting of 8 lecturers from Ignatius Ajuru University, 12 lecturers from Rivers State University and 11 lecturers from University of Port Harcourt Rivers State. There was no sampling as a result of the manageable size of the population. A 28-item questionnaire was used to collect data for the study, the questionnaire was validated by three experts, the internal consistency of the questionnaire was determined using Cronbach Alpha (α) method and a coefficient of 0.82 was obtained. Data collected were analyzed using mean and standard deviation and t-test analysis was used to test the null hypotheses of no significant difference. Result of the study revealed that 10 improvement need on clarity and organization of content, 8 improvement needs in creating an interactive and effective learning environment and 10 improvement needs in delivery styles. It was therefore recommended that the lecturers should seek self- development through capacity building workshop, seminars and in- service training to update their knowledge in the use of instructional materials for quality instructional delivery, participate in collaborative learning, and the Government should integrate technology into agricultural education instruction/curriculum.

Keywords: Professional, improvement needs, agricultural education lecturers, instructional delivery

Introduction

In the present time, survival of education in Nigeria depends on effective use of new teaching and learning technologies for instruction. An instruction is a set of directions or commands given to someone to guide them in performing a particular task or activity. Instruction according to Kridel (2010)^[8] is the creation and implementation of purposefully developed plans for guiding the process by which learners gain knowledge and understanding, and develop skills, attitudes appreciations and values. The author stated that instruction is frequently associated with the curriculum and generally refers to the teaching methods and learning activities that a teacher uses to deliver the curriculum in the classroom. Jeremiah, and Alamina, (2017)^[7] described instruction as all activities engaged in by the teacher with the aim of facilitating change in learner's behavior using different kinds of instructional delivery attempts.

Instructional delivery is when a teacher consciously utilizes his training, knowledge, skills and value and relays it in order to change the behavioral position of the learner. Etuk, and Umoh, (2003)^[5], viewed instructional delivery as the knowledge of teaching techniques and their application for learning to take place in such a flexible manner that would not distort the original intent of the teacher for being in the classroom. Donald (2021)^[3] opined that the process of instructional delivery must be based on stated objectives of the lesson, it is based on this that when the process of instructional delivery is over, then the opportunity to determine if the aim of the lesson has been achieved or not comes, which is the evaluation act that will tell if the lesson met stated objectives. The author stated that Instructional delivery is seen as the process of showing every activity the

teacher and the learner does in a classroom setting. He further stated that every effort that the teacher makes in order to have a fruitful time with the students by exposing the contents, employing methods, strategies, the pupils interaction with the environment, resources available and even the evaluation process sums up to mean instructional delivery. Wordu, and Ojorka (2018)^[14] in their opinion stated that the essence of the use of different instructional delivery models is to enable the instructor (lecturers) surmount the challenges on the organization and passage of the instruction to students who are assumed to have come from different backgrounds, therefore, possess different learning styles, pace and understanding the lessons based on their previous knowledge. From the foregoing, it is clear to us that one model of instruction will not be able to bring about quality instructional delivery that can produce the kind of result desired from the learners.

In the context of this study instructional delivery is the process, methods, strategies, approaches or even techniques employed by the lecturers to show every activity the instructor and the learner does in a classroom setting in order to have a fruitful time with the students by exposing the contents, employing different and methods, strategies, the student's interaction with the environment, resources available and even the evaluation process. The lecturer is expected to plan various ways to effectively deliver quality instruction to the students.

Teacher in the view of Okuku (2019)^[10] is a person trained and groomed from teacher preparation institutions for quality of skills, knowledge and attitudes to students. Similarly, Ndem (2016)^[9] stated that agricultural education lecturer is a person professionally trained in the field of

agriculture to acquire skills, knowledge, technical know-how and methodology needed for the teaching of agricultural education in Universities. In the view of Alkai, Ikehi and Okoye, (2016) ^[1] agricultural education lecturer is a professional who focuses on instructing agricultural education to Students. The author stated that agricultural education lecturers are responsible for conducting an instructional programme that educates students about career pathways in agriculture, and enhancing youth leadership. In the context of this study agricultural education lecturer is an individual that has undergone training in a University to acquire knowledge, skills and attitude in the professional areas of agriculture and charged with the responsibility of imparting knowledge, skills and attitude in agricultural education to student through quality instructional delivery in the University. Lecturers need improvement in order to enhance their knowledge and skills to be able to deliver quality instructional delivery.

Improvement is the process of making something better than what it was before. Onipede, lawal and Saminu (2020) stated that improvement of lecturers is a necessary process of helping lecturers of agriculture become better in their professional teaching career. In the opinion of Dumbiri, (2016) ^[4] improvements is a comprehensive or holistic process of developing lecturers in order to impart the education of University students. In the view of Anjov, Weye and Anyogo (2019) ^[2] improvement needs is the gap between what is required and the present state of the person in question. Isiwu (2019) ^[6] stated that improvement need is obtained by comparing the actual performance of an individual with his potential performance.

In this study improvement need is the gap between the present performances of agricultural education lecturers in teaching the content to produce University graduates.

Agricultural education lecturers require professional development and support to enhance their instructional delivery skills. These lecturers are responsible for educating students in the field of agriculture, which encompasses a wide range of topics such as crop production, animal husbandry, soil science, and agricultural technology. However, they may face challenges in effectively delivering of the curriculum content to their students. Instructional delivery plays a crucial role in engaging students, promoting understanding, and facilitating meaningful learning experiences. Agricultural education lecturers need to employ diverse instructional strategies, utilize appropriate teaching aids, and create an inclusive and stimulating learning environment. However, many lecturers may lack the necessary knowledge, skills, and resources to effectively deliver instruction in an engaging and impactful manner. Addressing the professional improvement needs of agricultural education lecturers in instructional delivery is essential to ensure high-quality education in agricultural education by enhancing their instructional delivery skills, lecturers can better engage students, facilitate their understanding of complex concepts, and inspire them to pursue careers in agriculture. It is therefore, necessary to identify and address the specific professional improvement needs of agricultural education lecturers in the Universities that will enhance quality instructional delivery.

Aim and objectives

The main aim of this study is to determine the professional improvement needs of agricultural education lecturers for quality instructional delivery in the Universities in Rivers State.

Specifically the study sought to determine

1. Professional improvement needs of agricultural education lecturer in clarity and organization of content in Obio/Akpor Local Government Area of Rivers State.
2. Professional improvement needs of agricultural education lecturer in creating an interactive and effective learning environment in Obio/Akpor Local Government Area of Rivers State.
3. Professional improvement needs of agricultural education lecturer in delivery style in Obio/Akpor Local Government Area of Rivers State.

Research Questions

The following research questions guided the study:

1. What are the professional improvement needs of agricultural education lecturer in clarity and organization of content for quality instructional delivery in in Obio/Akpor Local Government Area of Rivers State?
2. What are the professional improvement needs of agricultural education lecturer in creating an interactive and effective learning environment for quality instructional delivery in Obio/Akpor Local Government Area of Rivers State?
3. What are the professional improvement needs of agricultural education lecturer in delivery styles for quality instructional delivery in Obio/Akpor Local Government Area of Rivers State?

Research Hypotheses

The following null hypotheses were tested in the study:

1. There is no significant difference in the mean rating of the responses of male and female lecturers on the professional needs of agricultural education lecturers on clarity and organization of content for quality instructional delivery in Obio/Akpor Local Government Area of Rivers State.
2. There is no significant difference in the mean rating of the responses of male and female lecturers on the professional needs of agricultural education lecturers on creating an interactive and effective learning environment for quality instructional delivery in Obio/Akpor Local Government Area of Rivers State.
3. There is no significant difference in the mean rating of the responses of male and female lecturers on the professional needs of agricultural education lecturers on delivery style for quality instructional delivery in Obio/Akpor Local Government Area of Rivers State.

Methodology

Survey research design was adopted for the study. Survey research design according to Ukonze, Enejo, Akpai, and Azunku, (2019) ^[13]. is a descriptive study which uses sample of an investigation to document, describe and explain what is in existence or non-existence on the present status of phenomena being investigated. This design is appropriate for the study because these studies sought for the opinion of respondents to document and explain the present status of the phenomenon under instigation. The study was carried out in three Universities in Obio/Akpor local Government Area of Rivers State. The population of the study was 31 lecturers, consisting of 8 lecturers from Ignatius Ajuru University, 12 lecturers from Rivers State University of Science and Technology and 11 lecturers from

University of Port Harcourt Rivers State; there was no sampling due to the manageable size of the population. A 28 items questionnaire was used in collecting data for the study. The questionnaire was prepared from review of related literature. The questionnaire had two columns of needed and performance category.

The needed category has a 4 points response option of highly needed (HN), averagely needed (AN), slightly needed (SN), and not needed (NN) with corresponding value of 4, 3, 2 and 1 respectively. Also, the performance category has a 4 – point response options of high performance (HP), average performance (AP), low performance (LP) and no performance (NP) with corresponding value of 4, 3, 2 and 1 respectively. The instrument was validated by three (3) experts one from Faculty of Vocational and Technical Education, Nsukka, two from University of Port Harcourt Rivers State. The validates were requested to proffer suggestions and effect corrections that will improve the quality of the instrument in meeting the purpose of the study. The corrections and suggestions of the validates were incorporated to the final copy of instrument that was used to collect data for the study. The reliability of the instrument was determined using Cronbach Alpha (α) method and a reliability coefficient of 0.82 was obtained. The researchers hired two (2) research assistants who were briefed on how to administer and retrieve the instrument from the respondents to help in the administration of the instrument, all copies of The questionnaire were retrieved given a retrieval rate of

100%. Data collected were analyzed using need-gap analysis to determine areas of instructional delivery where agricultural education lecturers needed improvement for quality instructional delivery in Universities Rivers State.

Need gap analysis was determined as follows:-

1. The mean (XN) of the needed category was determined for each item
2. The mean (XP) of the performance category was determined for each item.
3. The need gap (NG) was determined by finding the difference between the values of the two means. That is (NG=XN-XP)
 - When (NG) need gap value is positive (+), it means improvement is needed because it implies that the level at which the lecturer of agricultural education perform that item is lower than the level it was needed.
 - When the need gap value (NG) is negative (-), it means that improvement is not needed because the level at which the lecturer performed that item is higher than what is needed.
 - When need gap value (NG) is equal to zero (0) it implies that improvement is not needed because the level at which the lecturer performed that item is equal to the level at which the skill item is needed.

Results

The result of the study was obtained from the research questions answered through data collected and analyzed.

Table 1: Mean Ratings of the Responses of Agricultural Education Lecturers in University on the Professional Needs in Clarity and Content Organization.

S/N	Clarity and Content Organization. Ability to:	XN	XP	NG=XN-XP	Remarks
1.	Present content in a logical sequence that is easy to follow	1.68	1.24	0.44	IN
2.	Break down content into manageable sections or modules	3.50	2.40	1.1	IN
3.	Clearly identify and effectively communicate main ideas to learners	3.12	1.93	1.19	IN
4.	Use headings, bullets points or other formatting tools to help to organize the content	3.30	2.21	1.09	IN
5.	Use examples or analogies to help learners understand complex concepts	3.36	1.73	1.63	IN
6.	Identify content that will be relevant to learners interest and needs	2.35	3.30	-0.95	INN
7.	Use clear and concise language that is easy to understand	3.50	2.20	1.30	IN
8.	Provide clear instructions for completing learning task or assignment	3.36	1.57	1.79	IN
9.	Arrange content to aligned with learning objectives and outcome	3.35	1.79	1.56	IN
10.	Reviews and summarizes key points to reinforce learners understanding of the content.	3.36	1.57	1.79	IN
	Grand mean	3.09	1.99	1.09	

Key IN = improvement needed, INN = improvement not needed, XN =mean of needed category, XP =mean of performance category, NG=need gap value.

Table 1: revealed that the need gap values of items 1 to 5, 7 to 10 ranged from 0.44 to 1.79 and they were positive indicating that agricultural education lecturers in Universities in Rivers State needed improvements in the 9

Professional skill items. The need gap value of item 6 was 0.95 which was negative indicating that, lecturers did not need improvement in that professional skill item.

Table 2: Mean Ratings of the Responses of agricultural education lecturers in Universities on the Professional Needs in Creating Interactive and Effective Learning Environment.

S/N	Creating an Interactive and Effective Learning Environment. Ability to:	XN	XP	NG=XN-XP	Remarks
1.	Encourage students to ask questions and to share their thoughts ideas during the instructional delivery	3.57	1.65	1.86	IN
2.	Provide instructional delivery to provide opportunities for group discussion and collaboration	2.76	2.40	0.36	IN
3.	Create interactive activities and exercises that required active participation from learners	3.44	1.63	1.81	IN
4.	Provide tasks or projects that allowed students to apply the concepts they learnt	3.60	1.47	2.14	IN
5.	Incorporate learners interest and experiences in instructional delivery to increase engagement	2.50	3.63	-1.13	INN
6.	Adjust their instructional delivery based on feedback and questions from learners	3.56	1.51	2.05	IN
7.	Give students teach or present to their peers to enhance their communication skills	3.59	1.46	2.11	IN
8.	Use technology and multimedia to increase interactivity and engagement during the instructional delivery	3.66	3.64	0.02	IN
	Grand Mean	3.34	2.17	1.16	

Key IN = improvement needed, INN = improvement not needed, XN =mean of needed category, XP =mean of performance category, NG=need gap value.

Table 2: revealed that the need gap values of items 1 to 4, 6 to 8 ranged from 0.02 to 2.13 and they were positive indicating that of agricultural education lecturers in the University in Rivers State needed improvements in the 7

Professional skill items. The need gap values of items 5 was -0.13, this indicates that the lecturers did not need improvement in that item.

Table 3: Mean Ratings of the Responses of Agricultural Education Lecturers in Universities on the Professional Needs in Delivery Styles.

S/N	Delivery Styles. Ability to:	XN	XP	NG=XN-XP	Remarks
1.	Use a variety of teaching methods to suite different learning styles and preferences.	3.15	1.91	1.24	IN
2.	Use humor & storytelling during instructional delivery.	3.79	2.32	1.47	IN
3.	Present real world examples to make content relevant and applicable to learners	1.84	2.45	-0.61	INN
4.	Avoid using technical language that learners may not understand	3.15	1.94	1.21	IN
5.	Provide clear and concise explanation	3.47	1.71	1.76	IN
6.	Provide timely and constructive feedback to learners	3.51	1.67	1.84	IN
7.	Use visual aids and multimedia to enhance learners engagement and understanding	3.59	1.48	2.11	IN
8.	Allow for pauses and breaks during the instructional delivery	3.08	2.12	0.96	IN
9.	Think critically and ask questions to promote deeper understanding of the content	3.60	1.40	2.20	IN
10.	Create positive and supportive learning environment	3.51	1.67	1.84	IN
11.	Create air-condition classroom (work on this)	2.40	3.05	-0.65	INN

Key IN = improvement needed, INN = improvement not needed, XN =mean of needed category, XP =mean of performance category, NG=need gap value.

Table 3 revealed that the need gap values of items 1 to 2, 4 to 10 ranged from 0.96 to 2.20 and they were positive indicating that of agricultural education lecturers in Universities in Rivers State needed improvements in the 9 professional skill items. The need gap values of items 3 and 11 ranged from 0.61 to 0.65 this indicates that the lecturers did not need improvement in the 2 items.

Hypotheses

Hoi: There is no significant difference in the mean rating of the responses of male and female lecturers on the professional needs of agricultural education lecturers on clarity and content organization for quality instructional delivery in Universities.

Table 4: T-test analysis on the mean ratings of the responses of male and female lecturers on the professional needs of agricultural education lecturers on clarity and content organization for quality instructional delivery in Universities.

S/N	Variables	N	Mean	SD	SE	P-Value	Remarks
1	Male lecturers	21	3.21	0.43	1.22	00.5	NO
2.	Female lecturers	10	3.35	1.15	1.26		Significance

Key= P-Value 0.05 = Significance difference. P-Value 0.05 = No Significance difference.

Table 4 reveals that the p-value of lecturers professional improvement needs was 0.05 and is equal to P= 0.05. This indicates that there was no significant difference in the mean ratings of male and female of agricultural education lecturers in Universities on clarity and content organization for quality instructional delivery. Therefore the hypothesis of no significant difference was upheld.

Ho2: There is no significant difference in the mean rating of the responses of male and female lecturers on the professional needs of agricultural education lecturers on creating an interactive and effective learning environment for quality instructional delivery in Universities.

Table 5: T-test analysis on the mean rating of the responses of male and female lecturers on the professional needs of agricultural education lecturers on creating an interactive and effective learning environment for quality instructional delivery in Universities.

S/N	Variables	N	Mean	SD	SE	P-Value	Remarks
1.	Male lecturers	21	3.10	21.11	3.65	0.15	No
2.	Female lecturers	10	3.23	0.86	1.63		Significance

Key= P-Value 0.05 = Significance difference. P-Value 0.5 = No Significance difference.

Table 5: reveals that the P-value of teachers' professional improvement needs on was 0.05 and it is equal to P= 0.05. This indicates that there was no significant difference in the mean ratings of male and female of agricultural education lecturers in Universities on creating an interactive and effective learning environment for quality instructional

Delivery. Therefore the hypothesis of no significant difference is upheld

Ho3: There is no significant difference in the mean rating of the responses of male and female lecturers on the professional needs of agricultural education lecturers on delivery style for quality instructional delivery in Universities

Table 6: T-test analysis on the mean rating of the responses of male and female lecturers on the professional needs of agricultural Education lecturers on delivery style for quality instructional delivery in Universities.

S/N	Variables	N	Mean	SD	SE	P-Value	Remarks
1.	Male lecturers	21	3.27	0.53	1.23	0.05	No
2.	Female lecturers	10	3.30	1.25	1.27		Significant

Key= P-Value 0.05 = Significance difference. P-Value 0.05 = No Significance difference.

Table 6: reveals that the P-value of teachers' professional improvement needs was 0.05 and is equal to $P=0.05$. This indicates that there was no significant difference in the mean ratings of male and female of agricultural education lecturers in Universities on delivery style for quality instructional delivery. Therefore the hypothesis of no significant difference was upheld

Discussion of Findings

The study found out that agricultural education lecturers in University, needed improvement in: 9 professional skills in content organization (e.g. Present content in a logical sequence that is easy to follow, Break down content into manageable sections or modules, Clearly identify and effectively communicate main ideas to learners, Use examples or analogies to help learners understand complex concepts, Use clear and concise language that is easy to understand, Provide clear instructions for completing learning task or assignment); 07 professional skills in creating an Interactive and Effective Learning Environment (e.g. Encourage students to ask questions and to share their thoughts ideas during the instructional delivery, Provide instructional delivery to provide opportunities for group discussion and collaboration, Create interactive activities and exercises that required active participation from learners, Adjust their instructional delivery based on feedback and questions from learners, Give students teach or present to their peers to enhance their communication skills); and 9 professional skills in delivery style (e.g. Uses a variety of teaching methods to suite different learning styles and preferences, Uses humor and storytelling to make the instructional delivery more interesting and memorable, Avoid using technical language that learners may not understand, Use visual aids and multimedia to enhance learners engagement and understanding, To create positive and supportive learning environment that encourages learners to take risk and learn from mistakes). The findings of this study were in consonance with the findings of Omoleye, Lawal, and Ahmad, (2020)^[11, 12], in a study carried out on technical and pedagogical skill improvement needs of agriculture teachers for effective teaching in junior secondary schools in Gombe State, needed improvement in 13 technical skills in animal production, 18 technical skills in crop production, 10 technical skills in agricultural engineering, 7 in agricultural economics and 12 technical skills in soil science.

Conclusion

Improving instructional delivery in agricultural education lecturers can lead to increased student engagement, deeper understanding of agricultural concepts, and the development of necessary skills for future careers in the agricultural sector. It is essential to recognize the significance of effective instructional delivery in promoting meaningful learning experiences and inspiring students to pursue agricultural studies and contribute to the growth of the industry.

Recommendations

Based on the findings of the study the following recommendations were made:

1. Agricultural education lecturers in University should seek self- development through capacity building workshop, seminars and in- service training to update

their knowledge in the use of instructional materials for quality instructional delivery

2. Agricultural education lecturers in Universities should participate in collaborative learning communities where they can share best practices, exchange ideas, and learn from one another. Establishing online forums, teacher networks, or professional learning communities can facilitate knowledge sharing and provide a platform for teachers to discuss instructional delivery strategies, challenges, and successes.
3. Government should integrate technology into the curriculum. This can include utilizing agricultural simulations, virtual laboratories, online resources, and educational apps that enhance student engagement and understanding. This will help lecturers to leverage digital tools and platforms to deliver dynamic and interactive lessons.

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