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Professional Competency Improvement Needs of Agricultural Education Lecturers in Computer-Based Instructional Delivery in Universities in South-South Nigeria

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Abstract: *The study examined the professional competency improvement needs of Agricultural Education lecturers for computer-based instructional delivery in Universities in South-South Nigeria. The study had 3 (three) purposes, in line with these purposes, 3 (three) research questions were answered and 3 (three) hypotheses tested at 0.05 level of significance. The study adopted survey research design. The population of the study was 101 comprising of 69 mala and 32 female Agricultural Education lecturers in universities in the area. Census sampling techniques was used for the study because it was manageable for the researchers hence all the population was used. The instrument for data collection was a structured questionnaire titled "Professional Competency Improvements Needs of Agricultural Education Lecturers in the Adoption of Computer Based Instructional Delivery in Universities Questionnaire (PCINAELACIDUQ). The reliability of the instrument was established through Cronbach alpha method and it yielded an internal consistency of 0.85 and 0.81 for need and performance categories respectively. Data for the study was collected by the researchers and six research assistants. 98 copies representing 97% of the instrument were retrieved (68 from male and 30 from female agricultural education lecturers) for analyses. Data for the study was analyzed using mean, improvement need index (INI). It was found from the study that Agricultural Education lecturers need professional competency improvement in: basic computer skills and installation (18 item); MS word (17 item) and MS excel (15 items). It was further concluded that Agricultural Education lecturers need professional competency improvement in 50 items in computer-based instructional delivery in Universities in South-South Nigeria. Among the recommendations made were that**; Lecturers should individually seek improvement in the identified competency areas of basic computer application through workshops, capacity building programs, conferences so that they can effectively teach their students; school management should organize retraining or in-service training for Agricultural Education lecturers using specialized resource persons in computer application to impact skills in the identified areas of need in MS word and that the identified professional competency needs in MS excel should be enshrined into the curriculum used in universities where upcoming lecturers are trained.*

Keywords: Professional competency, improvement, computer, agricultural education and lecturers.

Introduction

Agriculture has been a subject taught at all levels of educational system (from Primary schools to tertiary institution) in Nigeria. Agriculture according to Obue (2019) is the vehicle for national development. Teaching of agriculture in schools helps in the transmission of knowledge, skill and attitude in agriculture from one generation to another generation through educational system. Also Ugo (2019) stated that

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agricultural education deals with the teaching of how to grow crops, rear livestock and perform other farm operations that ensure acquisition of knowledge and skills in the subject. In this study agricultural education is a programme taught in schools such as colleges and universities, for the students to acquire knowledge, skill and attitude that will prepare them for occupation in agriculture. Agricultural education as reported by Federal Republic of Nigeria (FRN) (2014) is the art and science of applying scientific principles to the growing of crops and rearing of animals for man's use. Agriculture is a blend of many of the basic pure and applied sciences for example botany, zoology, chemistry, and genetics among others. According to Agricultural Education departmental handbook (2024), the objectives of Agricultural education in universities on the new national curriculum include; to produce highly motivated, competent and conscious Agricultural Education teachers that would be efficient and effective in the classroom and in the world of work, to produce teachers with intellectual and professional ability adequate for leadership in performance of their duties in farm management, to produce teachers with the spirit of researching, creativity and self-reliance in teaching Agricultural Education, Vocational Education and other related occupations, to train teachers that will adjust rightly to social life of the community and the society at large in contributing to rural development and environmental sustainability, to produce teachers that will have absolute commitment to the teaching profession by fostering integrity, discipline, honors and respect in teaching locally and globally, to offer training and retraining opportunities to serving teachers who need to update their knowledge, skills and attitude in the teaching profession through varied programmes such as seminars, workshops, conferences and in-service courses, to promote the philosophy and ideas of teaching profession in Nigeria through successful implementation of National Policy on Education.

In order to achieve the objective of preparing university students for occupation in agriculture, Lecturers of agricultural education must play a vital role in imparting knowledge and skills in agriculture to the students. Ndem (2016) noted that they are individuals who are professionally trained in the field of agriculture to acquire knowledge, skills, attitude, technical know-how and methodology needed for teaching agriculture at all levels to students. Furthermore, Babayo and Kesiki (2019) stated that those who teach agriculture are those trained in the pedagogical and technical areas of agriculture and charged with the responsibility of imparting knowledge and skills in agriculture to students. In relation to this study, Lecturers of agricultural education is an individual who has completed at least master's degree programme and is employed to teach agricultural education to students in universities. Such person is professionally trained to acquire knowledge, skills and attitude in agriculture and charged with the responsibility of imparting the acquired knowledge, skills and attitude in agriculture to students in universities. Agriculture at the university level in the context of this study is called agricultural education. Lecturers at this level therefore must be efficient in teaching the students in order to prepare them for occupation in agriculture and to develop research skills that would lead to solutions to food insecurity. Agricultural Education Lecturers need to be competent on the job in order to carry out efficient teaching. A lecturer of agricultural education must complete his preparation for his job and keep abreast of the changes in his work through professional improvement activities especially with regards to the use of computers in the emerging technology world.

A profession according to Omena (2022) refers to a job that needs special training or skills especially one that needs a high level of education; the author further noted that profession involves specified skills that relate to a particular job for the recognition of the individual in a profession. A teacher of Agricultural Education need to possess both technical and pedagogical competencies that are required by the teaching profession. They include planning instruction, implementing instruction, evaluating instruction and managing principles and practices in Agricultural Education. Performing up to expectation in these tasks requires that the lecturers demonstrate desirable level of competency. Competencies is the ability to do something well, measured against a standard, especially ability acquired through training or experience. Competency was defined by Ojukwu (2016) as is the knowledge, skills and behaviour that enable a person to meet established performance criteria. Chukwone and Obichili (2019) stated that competency is the

required knowledge, skills and attitude needed by someone to perform an established task. Moreover, Shabi (2016) described competency as the knowledge, skills and abilities to perform a task effectively. Competency can be viewed as the knowledge, capabilities and behavior which someone exhibits in doing his job and which are factors in achieving the objectives pertinent to the teaching strategies. In order to work in the professional field such as agricultural education, to develop knowledge, to take responsibility, to plan and to pursue development, there must be possession of Professional competencies.

Professional competencies are regarded as skills, knowledge and attributes that are specifically valued by the professional associations, organizations and bodies connected to ones future career. Professional competence is acquired with qualifications in a particular specialty and the knowledge acquired shall be applied in practice. People's competence can be discussed if a person is able to safely and successfully realize his or her intentions, when a person has the knowledge and skills to deal with problems and challenges, and if a person is able to plan his or her activities in different situations (Tilla, 2016). Professional competence can only be gained in action by learning or working. Udie (2023) considers the concept of professional competence as a means of achieving better quality work and, in order to achieve personal objectives. Given that the responsibilities of agricultural education lecturers require effectiveness in both theory and practical, there is need for them to demonstrate high level of professionalism in order to meet up with what the society expect from them. Professional competency in the study implies knowledge, skills and attitude in the use of computer needed by agricultural education Lecturers to be efficient in teaching and preparing agricultural education students for occupation in agriculture and related field.

Computer according to Digital Bridge Institute (2019) is an electronic device that accepts data or information, process it to give output (result) and store the information or data based on a program or sequence of instructions. Moreover, Obunadike and Eje (2022) explained that computer is generally regarded as an electronic device for storing and processing data, typically in binary form, according to instructions given to it in a variable program. It is an electronic machine that can be used to perform wide range of task such as word processing, spreadsheet, Power Point Presentation, Photo editing, E-mail, Video editing, Audio recording, system management and software development. Eze and Sunny (2017) opined that computer is a device used in collecting, storing, retrieving, processing, presenting and transmitting data. In this study, computer is an electronic device that can be used by Lecturers of agricultural education to efficiently teach the undergraduate students to achieve the objective of teaching agricultural education at the university level. Presently, there is advance technology in the whole world where almost all facet of life is being computerized particularly the educational sector. Computer are being used to teach at tertiary institutions thus, the ability to use computer efficiently has become an inevitable tool for assessing lecturer's competency in delivering their primary assignment of teaching, research and community service. Moreover, ability to use computer effectively has become important criteria for employment into private and public educational organizations (Amedu, 2014).

In spite of the enviable importance of computer, it was discovered by the researchers in the area of the study through focus discussion with some of the Lecturers of agricultural education were having problems and serious difficulties in the use of computer for effective teaching of their students and in delivering other services expected of them. The difficulty of the Lecturers in the use of computer might be responsible for the failure of graduates in effectively carrying out research and the inability of most graduates to demonstrate any production skill in agriculture which defeat the objective of teaching agricultural education as a vocational course for self-reliance. To put an end to the inability of agricultural education Lecturers in the use of computer and to achieve the objective of programme in the university, these Lecturers needs training on applying the various computer programmes and software for effective teaching of their courses and other related responsibilities. These computer application areas needed by lecturers according to Omena (2020) include preliminary understanding of computer system, Window operating environment, and Microsoft word, Microsoft Excel, Power point and Internet usage and networking. In

the context of this study, the professional competency expected of agricultural education lecturers are in; basic computer skill and installation, micro-soft word, micro soft excel, PowerPoint, internet usage/networking and multimedia. In the context of this study, the professional competencies in computer application are basic computer installation, micro soft words and Microsoft excel.

Basic computer installation entails the lecturer's ability in understanding basic computer hardwares / softwares, using Windows Explorer to find and open a file, creating folder for grouping files, installing common software, connect flash or other external devices to work with the computer (Shallimar, 2020). According to Ugwu, Agatha Kelechi and Eunice (2020), the lecturers also need to be competent in using basic computer peripherals such as mouse, keyboard and others properly, using basic keyboard functions such as backspace, enter/return, space bar, delete, tab, shift, and caps lock. They also include ability to carry out basic typing, finding, running/closing a program, understanding how files, folders/directories work and connecting cables for printers, phone or other devices (Nnaji**,** 2020). Microsoft word is another indispensable skill needed by lecturers in the use of computer for instructional delivery. Egbunefu, Amadi and Nwobike (2018) noted that they entail skills in positioning fingers appropriately for fast typing, using track change features, performing margin / column editing, formatting size / styling of text character, using spelling / grammar checker in word, use /update antivirus programs, converting to and from pdf/words. In a study by Ali, Haolader Muhammad (2018) it was found that lecturers need Microsoft word competencies in creating Tables by drawing or insertion, adjust or increase screen brightness while typing, inserting page numbers, printing a finished document, sharing finished documents. For Microsoft excel, Azhi (2016) noted that no lecturer can deliver services using computer without sufficient knowledge of excel. In tandem with this assertion, Jyoti (2014) identified the Microsoft excel competencies needed by lectures to include; locating the File tab, entering data in a cell, pressing enter or tab to move to the next cell, formatting data in excel. Further, Ugwu and Eunice (2020) found that skill improvement in operating spreadsheet program, adjusting rows/columns, charting the data and sharing excel file using e-mail or the Web are needed for efficient use of computer for academic service delivery by teaches. Thus, to cope in delivering their services in the emerging global technology driven education system, Agricultural Education lecturers would require to continuously improve in the use of computer for their instruction.

Improvement is the process of changing a situation or programme for better. Improvement in this study involves enhancing the capability of agricultural education Lecturers in the use of computer to impart appropriate knowledge, skills and attitude to students. Obunadike and Eje (2022) explained that it is the process of providing special retraining in computerized technical and pedagogical competencies in agriculture given to Lecturers to make them perform better. In South-South Nigeria, it has been observed by the researcher that Lecturers of agricultural education depend mostly on the traditional face to face interaction to deliver their instructional services. The implication of these practices as reported in a study by Ibe and Uloh (2019) is that graduates from the programme are insufficiently skilled to fix themselves into the world of work of agriculture and to make a living. Lecturers of Agricultural Education also impart information in agriculture to students, undermining modern computer facilities to use for skill development for preparation of students towards gainful employment in agriculture in the future. Interaction with some Lecturers of agricultural education by the researcher through focused discussion revealed that most lecturers themselves do not possess sufficient competencies in computer application for teaching agriculture which they are expected to impart to students and there is dearth of literature on those computer application competencies which the lecturers need to improve on. This creates a research gap which this present study tends to bridge.

Purpose of the Study

The general purpose of the study is to determine professional competency improvements needs of agricultural education lecturers for computer based instructional delivery in Universities in South-South Nigeria. Specifically, the study sought to:

1. determine the professional competency improvement needs of agricultural education lecturers in basic computer skills and installation.

2. ascertain the professional competency improvement needs of agricultural education lecturers in Microsoft word.
3. determine the professional competency improvement needs of agricultural education lecturers in Microsoft Excel.

Research Questions

The following research questions guided the study:

1. What are the professional competency improvement needs of agricultural education lecturers in basic computer skills and installation?
2. What are the professional competency improvement needs of agricultural education lecturers in Microsoft word?
3. What are the professional competency improvement needs of agricultural education lecturers in Microsoft Excel?

Methodology

Survey research design was adopted for the study. Nworgu (2015) defined survey research design as the design that utilizes data from a representative sample of the entire population for generalization. This design was therefore adopted for this study so that data from the representative sample of Agricultural Education and Computer Education lecturers in Universities in South-South States of Nigeria was generalized to entire population. The area of the study was South-South region of Nigeria comprising six States: Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers. They are popularly called the Niger delta region. The population of this study was 101 comprising 69 male and 32 female Agricultural Education lecturers in universities in the area. Census sampling techniques was used as all members of the population were used because they are accessible and manageable. A structured questionnaire divided into two categories was used for data collection. The instrument was titled "Professional Competency Improvements Needs of Agricultural Education Lecturers in the Adoption of Computer Based Instructional Delivery in Universities Questionnaire (PCINAELACIDUQ). The two categories were further divided into part A and B. Part A was on personal characteristics of the respondents while part B was further divided into 3 clusters via A, B and C. The Questionnaire had a four-points rating scale of HN-highly needed MN-Moderately Needed; S.L-slightly needed; NN- Not needed, HP-high performance, MP-moderate performance, SP-slight performance, NP-not performed. The both categories contained 132 items cutting across the 3 research questions. The draft copy of the instruments was subjected to face validation by three experts. Two lecturers in Agricultural Education programme in the department of Agricultural and Vocational Education and one from Measurement and Evaluation, Department of Science Education all in Michael Okpara University, Umudike. Twenty copies of the instrument were distributed to Agricultural Education and Computer Education lecturers in the Abia State, which is not part of the study area. The data gotten was analyzed using Cronbach Alpha coefficient and an internal consistency of 0.85 and 0.81 were obtained for need and performance categories respectively. This proves that the instrument is highly reliable for the study. Data for the study was collected from the respondents by the researcher and six research assistants. One hundred and one (101) copies of the questionnaire were distributed to the respondents and 98 copies representing 97% of the instrument were retrieved (68 from male and 30 from female Agricultural Education lecturers) for analyses.

Data for the study was analyzed using mean, improvement need index (INI) for research questions and t-test for testing hypotheses. For research questions, the performance items were represented with Xp while the needed items were represented with Xn. The performance gap was obtained by subtracting the Xn from Xp. This could yield zero, negative or positive result. A zero-result means that the extent which the item is performed is same as the extent to which they are needed which proves that no improvement is needed. A negative result means that the extent to which the item is performed is higher than they are needed, proving that no improvement is needed while a positive result means that the extent to which the item is performed is below the extent to which they are needed, implying that improvement is needed in such item.

Results

Research question 1: What are the professional competency improvement needs of Agricultural Education lecturers in basic computer skills and installation?

Table 1: Professional Competency Improvement Needs of Agricultural Education Lecturers in Basic Computer Skills and Installations

S/N	Item Statement	$\bar{X}n$	$\bar{X}p$	$\bar{X}n$-$\bar{X}P$ (PG)	RMK
1	Understand basic computer hardwares /softwares	3.12	2.02	1.10	IN
2	Using Windows Explorer to find and open a file	3.27	2.27	1.00	IN
3	Create folder for grouping files	3.02	2.02	1.00	IN
4	Install common software	2.96	2.16	0.80	IN
5	Connect flash or other external devices to work with the computer	3.08	2.08	1.00	IN
6	Use basic computer peripherals such as mouse, keyboard and others properly	3.34	2.84	0.50	IN
7	Move the cursor on-screen with the mouse or touchpad	3.36	2.86	0.50	IN
8	adjust windows	3.52	2.82	0.70	IN
9	using basic keyboard functions such as backspace, enter/return, space bar, delete, tab, shift, and caps lock	3.56	2.96	0.60	IN
10	Basic typing skills	3.12	2.82	0.30	IN
11	Finding, running/closing a program	3.41	2.41	1.00	IN
12	Connect power source to charge the computer	3.04	2.04	1.00	IN
13	Understand how files, folders/directories work	3.06	2.06	1.00	IN
14	Clicking, right-clicking/double-clicking the mouse	2.67	1.67	1.00	IN
15	Saving files	3.18	2.18	1.00	IN
16	Put on a computer set	3.16	2.16	1.00	IN
17	Shorting down/re-starting window	3.18	2.78	0.40	IN
18	Connect cables for printers, phone or other devices	3.06	2.06	1.00	N
	Pooled	**3.17**	**2.34**	**0.83**	**IN**

Keys: $\bar{X}n$-mean for need, $\bar{X}p$-mean for performance, PG-performance gap, IN-improvement needed, INN-improvement not needed

Data presented in Table 4.1 above shows that all the items had their PG ranging from 0.30 to 1.00 which are all positive. This means that the level at which the lecturers performed in the items are lower than the level at which they are needed or expected, implying that improvement is needed in such items. The pooled mean of 0.83 shows that in all, agricultural education lecturers need professional competency improvement in basic computer skills and installation.

Research question 2: What are the professional competency improvement needs of Agricultural Education lecturers in Microsoft word?

Table 2: Professional Competency Improvement Needs of Agricultural Education Lecturers in Microsoft Words

S/N	Item Statement	$\bar{X}n$	$\bar{X}p$	$\bar{X}n$-$\bar{X}P$ (PG)	RMK
1	Opening Microsoft Word	3.47	2.47	1.00	IN
2	Creating a new document in Word	3.76	2.76	1.00	IN
3	Saving typed document	3.02	2.02	1.00	IN
4	Use find and replace function	3.16	2.16	1.00	IN
5	Position fingers appropriately for fast typing according to Mavis Beacon guide	3.22	2.82	0.40	IN
6	Use track change features	3.73	2.73	1.00	IN

7	Perform margin / column editing	3.22	2.82	0.40	IN
8	Using basic formatting functions (bold, italics, underline, font size)	3.45	2.45	1.00	IN
9	Formatting size / styling of text character	3.22	2.82	0.40	IN
10	Use spelling / grammar checker in words	3.29	2.69	0.60	IN
11	use /update antivirus programs	3.36	2.76	0.60	IN
12	Convert to and from pdf/words	3.06	2.06	1.00	IN
13	Create Tables by drawing or insertion	3.22	2.92	0.30	IN
14	Adjust or increase screen brightness while typing	3.82	2.82	1.00	IN
15	Insert page numbers	3.16	2.16	1.00	IN
16	Printing a finished document	3.96	2.16	1.80	IN
17	Sharing finished documents	3.71	2.11	1.60	IN
	Pooled	**3.40**	**2.51**	**0.89**	IN

Keys: $\bar{X}$n-mean for need, $\bar{X}$p-mean for performance, PG-performance gap, IN-improvement needed, INN-improvement not needed

Data presented in Table 2 shows that all the items had their PG ranging from 0.10 to 1.80 which are all positive. This means that the level at which the lecturers performed in the items are lower than the level at which they are needed or expected, implying that improvement is needed in such items. The pooled mean of 0.89 shows that in all, Agricultural Education lecturers need professional competency improvement in Microsoft word.

Research question 3: What are the professional competency improvement needs of Agricultural Education lecturers in Microsoft Excel?

Table 3: Professional Competency Improvement Needs of Agricultural Education Lecturers in Microsoft Excel

S/N	Item Statement	$\bar{X}$n	$\bar{X}$p	$\bar{X}$n-$\bar{X}$P (PG)	RMK
1	Printing document	3.08	2.08	1.00	IN
2	Click Microsoft Excel Starter	3.80	2.80	1.00	IN
3	locating the File tab	3.38	2.98	0.40	IN
4	Entering data in a cell	3.24	2.94	1.00	IN
5	Press enter or tab to move to the next cell	2.96	2.36	1.00	IN
6	Formatting data in excel	3.06	2.06	1.00	IN
7	Copying, moving, or deleting data in excel	3.67	2.67	1.00	IN
8	Changing or editing the order	2.98	1.98	1.00	IN
9	Filtering out extra information	3.04	2.04	1.00	IN
10	Performing calculations such as sum, averages, percentages etc. in excel	3.41	2.41	1.00	IN
11	operate spreadsheet program	3.57	2.57	1.00	IN
12	Adjusting rows/column	3.67	2.67	1.00	IN
13	Charting the data	3.69	2.69	1.00	IN
14	Clicking the excel start button:	3.73	2.73	1.00	IN
15	Sharing excel file using e-mail or the Web	3.61	2.61	1.00	IN
	Pooled	**3.39**	**2.51**	**0.96**	IN

Keys: $\bar{X}$n-mean for need, $\bar{X}$p-mean for performance, PG-performance gap, IN-improvement needed, INN-improvement not needed

Data presented in Table 3 shows that all the items had their PG ranging from 0.40 to 1.00 which are all positive. This means that the level at which the lecturers performed in the items are lower than the level at which they are needed or expected, implying that improvement is needed in such items. The pooled mean of 0.96 shows that in all, Agricultural Education lecturers need professional competency improvement in Microsoft Excel.

Discussion of the Findings

The findings of the study in Table 1 revealed that Agricultural Education lecturers need professional competency improvement in 18 items in basic computer skills and installation such as understanding basic computer skills in hard wares and installation, using window explorer, create folders for grouping files, and install common soft wares among others. The finding agrees with Shallimar (2020) who found that teachers showed low mean and were close to the adjacent group scale of the lower level of knowledge in basic computer skill. The study further revealed that the teachers showed they are knowledgeable in ICT skills, but they do not know how to use it in complex applications. The finding of the study is also in line with Ugwu, Agatha Kelechi and Eunice (2020) who found that teachers need to be competent in planning, implementation of basic computer skill for instructional delivery. In keeping with the findings also, Nnaji (2020) found that computer teachers in schools agreed that they need basic computer skills such as word processing, spreadsheet, graphics and internet for effective teaching.

The findings of the study in Table 2 revealed that agricultural education lecturers need professional competency improvement in 17 items in Microsoft word such as positioning fingers appropriately for fast typing, use charged trained features, perform margin or column editing among others. The finding is in keeping with Egbunefu, Amadi and Nwobike (2018) who found that Microsoft word application skills are highly needed as shown in the result of improvement need index conducted among teachers. In line with the findings of these study also, Nnaji (2020) found that computer teachers in schools agreed that they need computer skills in word processing through MS word. Further in keeping with this finding, Ali, Haolader Muhammad (2018) found that for lecturers need improvement in the use of MS word for academic services as regards tasks such as opening finding and replacing, creating a new document in Word and others.

The findings of the study in Table 3 revealed that agricultural education lecturers need professional competency improvement in 15 items in Microsoft excel such as press enter or tab to move to the next cell, click micro soft excel starter, move to the next cell, enter data in a cell, and operate spreadsheet program. The finding is in keeping with Azhi (2016) who found that teachers need MS excel competency in: adding and deleting records from database, skill in linking information from different environment, sharing information among different workstations, use tags for various types of objects. In line with the findings of this study also, Jyoti (2014) revealed that planning of numerical tables titles, use of columns and rows, ability to plan spreadsheet, move from cell to cell in MS-excel; change a spreadsheet look, entering, edit and manipulation of data, produce a basic spreadsheet with formulae, creation of arithmetic formulae, using common functions, use of common numerical formatting and alignment, use spreadsheet to solve problems and project results and others were among the Microsoft excel skills needed by office technology teachers for quality service delivery.

Conclusion

Based on the findings of this study, the following conclusions were drawn. Agricultural Education lecturers need professional competency improvement in 50 items in computer-based instructional delivery in Universities in South-South Nigeria such as 18 basic skills for understanding computer skills examples are using window explorer, creating folders for grouping files and others. Also, for MS word 17 items were identified such as positioning fingers appropriate for fast typing, use changed train features and others while for MS excel 15 items were identified such as press enter or tab to move to the next cell, enter data in a cell and click micro soft among others. The implication is that there is need for training programs and policy support.

Recommendations

Based on the findings of this study, the following recommendations were made;

1. Lecturers should individually seek improvement in the identified competency areas of basic computer application through workshops, capacity building programs, conferences so they can effectively teach the students.
2. School management should organize retraining or in-service training for Agricultural Education lecturers using specialized resource persons in computer application to impact skills in the identified areas of need in MS word
3. The identified professional competency needs in MS excel should be enshrined into the curriculum used in universities where upcoming lecturers are train

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