

Information and Communication Technology Training Needs of Teachers of Agricultural Science for Effective Teaching in Secondary Schools in Delta State Secondary Schools, Nigeria

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Abstract: This study examined Information and Communication Technology training needs of teachers of agricultural science for effective teaching in Delta State secondary schools. Two research questions and two null hypotheses were formulated in line with the specific objectives. The study adopted descriptive survey research design. The population for this study consist of (253 male and 494 female) teachers of agricultural science in public secondary school in Delta State; totaling 747 respondents. Census study was adopted for this study. Questionnaire titled "Information and Communication Technology Training Needs of Teachers of Agricultural Science Questionnaire" (ICTTNTASQ) was developed by the researcher for data collection. The instrument was validated by two experts in Measurement and Evaluation from the Department of Educational Foundations, Niger Delta University, Nigeria. Crombach Alpha technique was used to determine the internal consistency of the questionnaire items and an overall reliability coefficient of 0.86 was obtained. The real limit of the mean and standard deviation were used to analyze the research questions while the t-test was used to test the null hypothesis at .05 level of significance. The findings revealed that teachers of agricultural science moderately needed training in computer appreciation and highly needed training in internet/networking. The findings also revealed that, there was no significant difference between the mean ratings of male and female teachers of agricultural science on ICT training needs for effective teaching in Delta State secondary schools. Based on the findings, the researcher recommends that, Computers and internet should be provided in the schools so as to provide access to ICT to both teachers and learners; Internet resources should be made adequately available in Delta State secondary, through collaborative efforts of the government and nongovernmental organizations; Seminar, conferences and workshop should be organized by educational institutions to educate the teachers of agricultural science on how to handle ICT facilities provided in the school to promote effective coverage of agricultural science syllabus.

Keywords: Information and Communication Technology, Training, Teaching and learning

INTRODUCTION

Information and Communication Technology (ICT) is an aspect of technology that is particularly beneficial in education. It has created new opportunities, such as online learning, and it also provides teachers and students with better and more recent resources for use in the classroom (Vhanabatte and Kamble, 2014). Information and communication technology (ICT) refers to technological instruments and resources used for information management, creation, and communication (Nordin, Hamzah, Yunus & Embi, 2010). Adedeji (2011) defines ICT as a broad group of technologies used for gathering, storing, changing, and delivering information to various locations in diverse formats. ICT encompasses information handling tools that are used in the processing, storing, distributing, and disseminating of information (Adedeji).

Information and communication technology (ICT) according to (Sarkar, 2012) covers hardware, software, networks, media, and information gathering, processing, transmission, storing, and presenting (data, speech, text, and images), as well as related services. Another application of the term "ICT" is the integration of telephone, computer, and audio-visual networks utilizing a single cable or connection system. Abdul-Salaam

(2011), added that Information and communication technology has the power to inspire and engage students in their learning, to connect academic learning to workplace practices, to accelerate, enhance, and deepen skill development, to lead to fundamental changes in education, to strengthen teaching, and to provide chances for links between the school and the external world. Information and Communication Technology (ICT) was proven by scholars (Onodugo, (2016); Nwabueze and Ukaigwe, (2015) to be a vital part of education in the secondary school system.

Secondary school education is the education that children receive after primary school but before continuing on to higher education, according to the National Policy on Education (Federal Republic of Nigeria, 2013). The main goals of secondary education include educating students for productive lives in society. The study of agricultural science in secondary schools is one way to prepare students for useful living in Nigeria. Agricultural science is one of the vocational courses provided in secondary schools which provides students with the information and skills needed for production (NPE, 2013). According to Tibi (2012), agricultural science is a subject designed to increase students' cognitive and physical talents in the field of agriculture, consequently

enhancing their knowledge, skills, and outlook on self-improvement and national development. Agricultural science, in the view of Obue (2019) is the engine for societal advancement since it aids in the educational system's ability to pass on agricultural knowledge, skills, and attitudes from one generation to the next. Agriculture science educates individuals in the production of crops and animals. It entails teaching students how to better manage agricultural activities in the production, processing, packaging, and marketing areas so they can find employment in the public or private sector or become independent. The National Policy of Education's (2013) stated objectives of agricultural science in secondary schools include igniting and maintaining students' interest in agriculture, facilitating the acquisition of fundamental information and practical skills in agriculture, and fostering students' independence. Given that senior secondary education is a requirement for achieving the new education reform because it acts as a bridge between basic education and tertiary education by absorbing the products of the former and providing entrants into the latter, the review of the agricultural science curriculum has been a true educational innovation. It called for new teaching strategies (Egunsola, Denga and Pev 2014). The classroom teacher, among other factors, frequently has a major impact on whether or not curriculum goals are achieved.

Teacher of agricultural science is someone who has obtained training in the pedagogical and technical aspects of agriculture and is tasked with imparting knowledge and skills about agriculture to students (Babayo and Kesiki, 2019). Teacher of agricultural science according to Ndem (2016), is someone who has obtained professional training in the agriculture and who has acquired the knowledge, skills, attitudes, technical know-how, and teaching methodologies required to impart agricultural science to students. In the context of the study, teacher of agricultural science is a person who has obtained training in agricultural knowledge, skills, attitudes, and pedagogy from a recognized tertiary institution and has been charged with the responsibility of imparting the same to students. In order to adequately prepare the students for careers in agriculture, agricultural science teachers must be effective at teaching.

Teaching is engaging students in a conversation where they actively contribute their ideas and views to a pertinent collaborative topic rather than passively listening and taking notes. Ayeni (2011) defines teaching as a methodical process of imparting knowledge, attitudes, and skills in line with professional ideals. It is seen as a process of student-teacher interaction where the teacher supports the learning while simultaneously considering the students as participants in the process. Secondary school agriculture instruction strives to ensure that students are exposed to and taught the fundamental concepts that are crucial to agricultural productivity in the community, exposing and integrating students in numerous practical initiatives that will aid in their development of the knowledge and skills necessary for

agricultural production (Olajide, Odoma, Okechukwu, Iyare, & Okhaimoh, 2015). Being able to attain a specific outcome or result is a sign of effective teaching (Drucker, 2015). Effective teaching is defined as instruction that fosters in students the skills of discovery, knowledge production, creativity, critical thinking, and lifelong learning. Teaching can be made much more efficient and of greater quality by employing information and communication technology in the classroom.

Integrating ICTs into agricultural science instruction in secondary schools according to Osinem and Nwoji (2010), improves teachers' professionalism and competence. Ogwo in Deebom and Zite (2016) provided more support for the idea that secondary school teachers will transition from being knowledge dispensers to learning facilitators, collaborators, coaches, mentors, knowledge navigators, and co-learners. One of the major differences in teachers' usage of technology among other factors has to do with gender (Baek, Zhang, & Yun, 2017; Scherer & Siddiq, 2015). According to several research, male and female teachers have different opinions on using technology depending on how they perceive it will help them accomplish their learning goals (Baek et al., 2017; Liaw & Huang, 2015; Scherer & Siddiq, 2015). Despite this, the perception is that there is a huge gender gap in access to and use of ICT in Nigerian schools (Peterman, Behram & Quisumbing, 2014). Additionally, teachers agricultural science, whether male and female, must acquire pertinent ICT skills that will enable teaching to occur at anytime, anywhere, and in any location if they are to favorably impact their students' development. Winzenried, Dalgarno, and Tinkler (2010), noted that teachers who have received ICT training are better at using technology to teach than those who have not. According to Vemula (2013), teachers must receive training to help students learn by making the process realistic, attainable, hard, yet enjoyable, and free from anxiety. The process of learning specialized skills to perform a task more successfully involves training.

Training, according to Gordon in Maduka (2016), is the process of developing a worker's skills and knowledge so they can perform a specific profession. Training is a systematic, pre-planned change in behavior that equips individuals with the level of abilities, information, and attitudes necessary to successfully complete a specific task or employment. In general, training is to offer learning opportunities that support individuals in performing effectively in their current and future employment. The main goal of training, according to Chan (2010), is to support the implementation of changes that will help in the resolution of a substantial problem. Training is not a one-step process, but rather a constant or never-ending activity because it enhances the abilities and competencies of new employees in carrying out their work and serves as a refresher course for experienced personnel. In the context of this study, training refers to a planned and systematic series of teaching carried out under qualified supervision and intended to transfer preset information and abilities in relation

to specified occupational objectives. Teachers of agricultural science must gain the information and abilities they need to confront the issues of globalization. Need, according to Procter in Okafor (2013), is a state of not having or desiring something essential or extremely helpful. According to Omeh (2010) a need is something that is necessary to close an existing gap in a necessary component. Lyad (2015) noted that, a person's information, abilities, and attitudes must change in order to meet their training needs. As a result, this addressed the company's problems and was focused on the needs of the firm.

The need for training is not a constant that can be measured and decided once. In order for training efficiency to be adjusted to modern developments and requirements, Liu (2015) said that training needs should be regularly identified at every institution. The aim of this study is to determine the information and communication technology training needs of teachers of agricultural science for effective teaching in secondary school in Delta State in the areas of computer appreciation and internet/networking. Every teacher in a school must possess the fundamental operational knowledge and computer skills that are key ICT competencies. Although most teachers have clear plans for how they want to use ICT in the classroom, a lack of technical expertise appears to be holding them back. Anyone with a fundamental understanding of ICT will acknowledge that mastering computer usage is a requirement before learning other ICT skills.

Computer has been defined as device that automatically performs operations, sorts' files and edits; making it possible to process information with great speed, accuracy and reliability (Okoroafor, 2010). 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 teachers of agricultural science to efficiently teach the senior secondary school students to achieve the objective of teaching agricultural science at the secondary school level. According to Dimoji, Benson-Emenike and Oju (2010) the computer as a system is made up of inter-related components that work together to achieve its purpose of handling data and information. The computer is a technological innovation under the control of stored programme that can perform some of the intellectual roles of man even beyond human capability. It is a power-driven machine equipped with keyboards, electronic circuits, storage compartments, and recording devices for the high speed performance of mathematical operations

Computer appreciation is an introductory course offered to computer users and students to teach them the basics of computing. It entails the knowledge of and ability to use computer and its related technologies efficiently covering a wide range of skills from the basics such as booting and shutting down computers, application of software packages,

to troubleshooting, installation and maintenance (Ajayi, 2000; Candy, 2002; Odelewe & Igboamalu, 2017). According to Achuonye (2003), computer appreciation is the level at which a computer user is operating in using computers and the associated software application packages in his day-to-day activities or work functions. This therefore underscores the need to develop college students computing skills required for entering and succeeding in the world of work.

Computer appreciation covered: "the understanding of basic computer components and functions (like hardware parts e.g. system unit, motherboard, screen, RAM, overhead projectors, etc.); booting and shutting down of computer to working with the application packages like Microsoft packages (Microsoft Word, Microsoft Excel, Outlook, Access); presentation tools (like PowerPoint, and electronic boards e.g. Blackboard, Starboard etc.); Graphic packages (like Corel Draw, Bender, Auto CAD); Database software (like Microsoft Access, Dbase, Fox Base, etc.); Spreadsheet software (like Excel, SPSS, G-Power, etc.); and Games packages" (Odelewe & Igboamalu, 2017). A firm understanding of this level of knowledge (skills development) will enable students to develop a wide range of computing skills such as data processing skills, graphic processing skills, spreadsheet processing skills, word processing, graphic skills, among other skills most sought after by the employers of labour.

The Internet is one of the computer and multimedia tools that have recently changed the workplace and the education. The Internet plays a major role in the lives of secondary school students today. Formally, that is in the school, students use the Internet for instance, when searching for information and when completing tests. According to Chicago Manual of Style (2010), the Internet, referring to the specific global system of interconnected networks, is a proper noun and should be written with an initial capital letter. According to Celik and Aydin (2014), access to the internet and digital media develop learners' verbal interaction skills, increase their vocabulary, reading comprehension as well as promote their global awareness. An Internet search, according to Voorhees (2010), is a tool for accessing data that was developed to make it easier to locate material stored on a computer system. In addition to Google, Yahoo, the Internet Archive, and Bing, there are numerous other search engines. These search engines streamline access to the vast amount of information on the World Wide Web's "www" by concentrating information from numerous relevant web sites (Purdue, 2013). On the internet, there are a wide variety of networks. Networks, also referred to as networks, can be divided into several groups. One technique makes it possible to identify a network's character based on the geographic region it serves: Local area networks (LANs) frequently only connect one home, one school, or one small office building, whereas wide area networks (WANs) connect many cities, states, or even the entire globe.

The Internet has also become a universal library, where books, journals, articles, teaching/learning and research

materials for different purposes can be sourced right within the confines of an individual's home in any part of the globe where Internet services are available. Internet technology has become the leading avenue of information generation and source of updated knowledge nowadays (Shika, 2016). The internet contains relevant information which the teacher could ask the students to look for in all areas of Agricultural science. According to Bamigboye and Ojo (2010), the main benefit of school Internet connection is the assistance it offers in supporting curriculum teaching and learning. Information and communication technology has endless possibilities for usage in the actual process of teaching and learning. Through web browsers on desktops or mobile devices, teachers and students always have free access to a wide range of material on the internet.

Statement of problem

Technology is reshaping the school system and educational institutions by teaching students new ways of studying and learning, and at the same time giving teachers new ways of teaching and imparting knowledge. The conventional method of teaching Agricultural Science hitherto had not yielded much meaningful impact on students' achievement, hence the need to imbibe new innovation. Nowadays, the use of the internet, digitalization and virtualization enable the integration of technology and education resources to help form a learner oriented teaching environment. In spite of the roles which ICT plays in the development and by extension, the overall development of a country report shows that majority of the teachers, even though believe that ICT usage was paramount for teaching, still lack the confidence and understanding in the integration process (TRCN, 2015). ICT as a teaching aid is complicated as it demands more specific skills from teachers. Moreover, the teachers of agriculture are facing some challenges that prevent them from the successful integration of ICTs in their classroom. To create ICT-enabled teaching and learning environments, it is also necessary to provide ICT training for teachers of Agricultural science. Consequently, ICT training is required to enhance the ICT skills of teachers of agricultural science in secondary schools in Delta State. Hence this study, ICT training needs of teachers of agricultural science for effective teaching in secondary schools in Delta State.

Purpose of the Study

The major purpose of this study is to examine Information and Communication Technology training needs of teachers of agricultural science for effective teaching in Delta State secondary schools. Specifically, the study seeks to:

1. ascertain computer appreciation training needs of male and female teachers of agricultural science for effective teaching in Delta State secondary schools.
2. determine internet/networking training needs of male and female teachers of agricultural science for effective teaching in Delta State secondary schools.

Research Questions

The study will be guided by the following research questions:

1. What are the computer appreciation training needs of male and female teachers of agricultural science for effective teaching in Delta State secondary schools?
2. What are the internet/networking training needs of male and female teachers of agricultural science for effective teaching in Delta State secondary schools?

Hypotheses

The following null hypotheses formulated would be tested at 0.05 alpha level.

HO₁: There is no significant difference between the mean responses of male and female teachers of agricultural science on computer appreciation training needs for effective teaching in Delta State secondary schools.

HO₂: There is no significant difference between the mean responses of male and female teachers of agricultural science on internet/networking training needs for effective teaching in Delta State secondary schools.

METHODOLOGY

The study was conducted with the use of descriptive survey research design. The population for this study consist of (253 male and 494 female) teachers of agricultural science in Delta State public secondary school; totaling 747 respondents. The population is a manageable size, hence the census study was adopted. Questionnaire tagged "Information and Communication Technology Training Needs of Teachers of Agricultural Science Questionnaire" (ICTTNTASQ) was developed by the researcher. The instrument had 20 items that were divided into ten (10) subheadings in accordance with the two objectives. The instrument was designed after the modified Likert scale with five (5) point response format, thus: 5 = Very Highly Needed (VHN), 4 = Highly Needed = (HN), 3 = Moderately Needed (MN), 2 = Partially Needed (PN) and 1= Not Needed (NN). The instrument was face-validated by two experts in Measurement and Evaluation from the Department of Educational Foundations, Niger Delta University, Nigeria. Cronbach alpha reliability method was used to determine the consistency of the questionnaire items and an overall reliability coefficient of 0.86 was obtained. Two research questions and corresponding hypotheses were raised for the study. 747 questionnaires was distributed, however, 651 (218 Male teachers of agriculture and 433 Female teachers of agriculture) were retrieved and analyzed, representing 87% rate of return. The real limit of the mean and standard deviation was used to answer the research questions. The real limit of the mean values as follows: VHN = 4.50 - 5.00, HN = 3.50 - 4.49, MN = 2.50 - 3.49, PN = 1.50 - 2.49 and NN = 0.50 - 1.49. While t-test was used to test the null hypotheses. The decision criteria was 0.05 Alpha level. Any null hypotheses whose P-value is less than 0.05 with 649 degree of freedom will be rejected but otherwise accepted. The analysis were conducted using the statistical package for social sciences (SPSS) version 25 programme.

Table 1: Mean and standard deviation scores of respondents on computer appreciation training needs for effective teaching of agricultural science in Delta State secondary schools.

S/N	Item Statement	Male (n ₁ = 218)		Decision	Female (n ₂ = 433)		Decision
		\bar{X}_1	SD ₁		\bar{X}_1	SD ₁	
1	Recognizing and utilizing windows, menus, as well as icons.	3.30	1.09	MN	2.94	1.14	MN
2	Use the computer key boards efficiently.	3.09	1.08	MN	2.95	1.16	MN
3	Store and retrieve documents in the computer.	3.37	1.10	MN	3.01	1.11	MN
4	Install vital computer programmes and soft wares.	3.37	1.09	MN	2.98	1.08	MN
5	Effectively prepare and edit documents.	3.02	1.16	MN	3.06	1.15	MN
6	Transfer files and information across sources.	3.09	1.19	MN	3.09	1.16	
7	Create backup copies of important software and documents.	3.09	1.24	MN	3.10	1.15	MN
8	Connect basic computer components required for use.	3.08	1.23	MN	3.24	1.13	MN
9	Connect computer components and hard wares.	3.13	1.22	MN	3.24	1.12	MN
10	Print documents from the computer.	3.41	1.22	MN	3.09	1.12	MN
	Grand Mean and Standard Deviation	3.20	1.16		3.07	1.13	

Key: \bar{X} = Mean, SD = Standard Deviation, Moderately Needed (MN) = 2.50 – 3.49

The data displayed in Table 1 show all the ten mean values which represent the ten items on the Table and they ranges from 2.94 to 3.41, while the standard deviation value of the ten items ranging from 1.08 to 1.24. On the whole, the grand mean of 3.20 and 3.07 were within the real limit of 2.50-3.49; this indicates that the respondents accepted that they moderately needed training on computer appreciation for effective teaching. The overall SD of 1.16 and 1.13 indicates that the respondents have similar opinions on computer appreciation training needs of teachers of agricultural science

to maintain effective teaching in Delta State secondary schools.

Research Question Two

What are the internet/networking training needs of male and female teachers of agricultural science for effective teaching in Delta State secondary schools?

Table 2: Mean and standard deviation scores of respondents on internet/networking training needs for effective teaching of agricultural science in Delta State secondary schools.

S/N	Item Statement	Male (n ₁ = 218)		Decision	Female (n ₂ = 433)		Decision
		\bar{X}_1	SD ₁		\bar{X}_1	SD ₁	

11	To make use of internet services including telnet, internet relay chat, as well as electronic data exchange	3.85	1.43	HN	4.29	0.92	HN
12	Establishing an email login and using it to communicate with others.	4.26	1.04	HN	4.27	0.91	HN
13	To gain knowledge of distance education delivery.	4.23	1.03	HN	4.28	0.96	HN
14	Sharing films, photos, and audio/voice notes.	4.32	1.04	HN	4.25	0.93	HN
15	To download relevant files for teaching agriculture.	4.28	1.03	HN	4.22	1.03	HN
16	Make websites and publish content online.	4.32	1.01	HN	4.20	0.93	HN
17	To access different websites where relevant documents can be obtained.	4.30	1.09	HN	4.18	1.06	HN
18	To access the internet with a variety of devices.	4.32	1.00	HN	4.27	1.00	HN
19	Choose the hardware and software that are necessary for the various network connections.	4.39	0.93	HN	4.21	1.03	HN
20	Transfer protocol.	4.27	0.91	HN	4.20	1.02	HN
Grand Mean and Standard Deviation		4.25	1.05		4.24	0.98	

Key: X = Mean, SD = Standard Deviation, Highly Needed (HN) = 3.50 – 4.49

The data presented in Table 2 show that the entire ten items had mean values which ranged from 3.85 to 4.39, and the SD value of the entire items (ten of them), ranged between 0.91 and 1.43. On the whole, grand mean of 4.25 and 4.24, were within the real limit of 3.50 - 4.49; indicating that the respondents accepted that they highly needed (HN) training on internet/networking, for effective teaching. The overall standard deviation of 1.05 and 0.98 indicates that the

respondents have similar opinions on internet/networking training needs for effective teaching agricultural science in Delta State secondary schools.

HO₁: There is no significant difference in the mean ratings of male and female teachers of agricultural science on computer appreciation training needs for effective teaching in Delta State secondary schools.

Table 3: t-test Analysis of respondents on computer appreciation training needs for effective teaching of agricultural science in Delta State secondary schools.

Group	N	Mean	SD	Df	t-value	P-value (Sig)	Chosen alpha level	Decision
Male	218	3.20	1.13	649	1.34	0.18	0.05	NS
Female	433	3.07	1.11					
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Key: SD = Standard Deviation, Df = Degree of freedom, Not Significant, $p > 0.05$

Table 3 disclosed the cumulative mean responses of male and female teachers of agricultural science on computer appreciation training needs for effective teaching in secondary schools as 3.20 and 3.07 respectively. The corresponding standard deviations are 1.13 and 1.11. The Table reveals that at 649 degree of freedom (df), the t-value is 1.34 with a p-value of 0.18. Testing at alpha value (0.05), the null hypothesis is accepted since the p-value of 0.18 is greater than the alpha value. Thus, there is no significant difference in the mean ratings of male and female teachers of agricultural

science on computer appreciation training needs for effective teaching in Delta State secondary schools.

HO₂: There is no significant difference in the mean ratings of male and female teachers of agricultural science on internet/networking training needs for effective teaching in Delta State secondary schools

Table 4: t-test Analysis of respondents on internet/networking training needs for effective teaching of agricultural science in Delta State secondary schools.

Group	N	Mean	SD	Df	t-value	P-value (Sig)	Chosen alpha level	Decision
Male	218	4.25	1.03	649	0.20	0.85	0.05	NS
Female	433	4.24	0.96					

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Key: SD = Standard Deviation, Df = Degree of freedom, Not Significant, p> 0.05

Table 4 disclosed the cumulative mean responses of male and female teachers’ agricultural science of on internet/networking training needs for effective teaching in secondary schools as 4.25 and 4.24 respectively, and the corresponding SD as 1.03 and 0.96. The table disclosed the df as 649; the t-value as 0.20; p-value as 0.85. Since the P- value of 0.85 is greater than the chosen alpha level of 0.05, thus the null hypothesis is accepted. Thus, no significant difference exist between the male and female teachers’ mean ratings on internet/networking training needs for effective teaching in Delta State secondary schools.

Discussion of the Findings

The findings on computer appreciation training needs of teachers of agricultural science for effective teaching in Delta State secondary schools were revealed in table 1. It showed that teachers of agricultural science moderately needed training on the ten (10) items in computer appreciation training identified. It was also found that male and female teachers of agricultural science have no significant difference in their views on computer appreciation training needs for effective teaching in secondary schools. The finding may be attributed to the fact that computers have not been introduced into classroom teaching and learning of agricultural science in Delta State secondary schools, most teachers of the subject therefore, do not see it necessary to acquire knowledge on computer appreciation all these years. The findings of this study is in agreement with the works of Onipede, Lawal, and Samuel (2020), who carried a study on competency training needs of agricultural science teachers in the use of computer for efficient teaching in senior secondary schools in Ekiti State. The study found that seven competency training needs in computer system. They include: terminology and uses of information technology, functions of various computer Hardware and peripheral, identification of input devices and their uses, types of output devices and their uses, terminology relating to storage Components , types of storage, their capacities and specific uses, basic features and terminology of operating system, introduction to Computer System. This findings is also in agreement with the views of Barroso (2019), who stated that the use of computers in the classroom provides teachers with the chance to impart digital citizenship lessons that show students how to use technology in an appropriate and responsible manner. Barroso (2019), further stated that teachers utilize computers to record grades, compute averages, keep track of attendance, and record grades. They also use computers to gather information about student performance in online programs and exams.

Computers are also infinitely patient, which makes them excellent teaching tools.

The findings on internet/networking training needs of teachers of agricultural science for effective teaching in Delta State secondary schools were revealed in table 2. It showed that teachers of agricultural science highly needed training on the ten (10) items in internet/networking training identified. It was also found that male and female teachers of agricultural science have no significant different views on internet/networking training needs for effective teaching in secondary schools. The finding may be as a result of the high cost of internet and government inability to introduce it in Delta State secondary schools for teaching and learning of agricultural science. This may have weakened the desire of teachers to acquire the needed knowledge in the past which may have affected teaching and learning of agricultural science during the period of covid-19. The findings are also in consensus with that of Shika, (2016) which revealed that internet is the primary source of current knowledge and an important channel for the creation of information. This finding is in line with that of Ilo and Ifijeh (2010) who believed that the Internet is the world's biggest network and that it enables computer users to easily communicate and access electronic databases. In addition to serving as a global library, the Internet has evolved into a resource for finding books, journals, articles, teaching/learning resources, and research materials for a variety of reasons from the comfort of one's own home in any location where Internet access is available. Darejan (2015), noted that, using the Internet can help teachers and students communicate better. Internet has evolved into a virtual arena where people socialize with their coworkers, friends, and family. Internet is a powerful instrument for socialising. Darejan (2015) continued by saying that using computers and the internet increases brain activity and makes learning more engaging and diversified.

CONCLUSION

The effectiveness and quality of education can be greatly improved by using information and communication technologies in the classroom. This study focuses on the ICT training needs of teachers of agricultural science in the areas of computer appreciation and Internet/networking. Teachers must receive comprehensive training and be encouraged to adopt new technologies. Given that teachers are the most important personnel in the educational sector, it is essential that they receive ICT training in order to give students a quality education.

RECOMMENDATIONS

1. Computers and internet should be provided in the schools so as to provide access to ICT to both teachers and learners.
2. Internet resources should be made adequately available in Delta State secondary, through collaborative efforts of the government and nongovernmental organizations.
3. Seminar, conferences and workshop should be organized by educational institutions to educate the teachers of agricultural science on how to handle ICT facilities provided in the school to promote effective coverage of agricultural science syllabus.

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