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ATTITUDINAL DISPOSITION OF AGRICULTURAL SCIENCE AND BIOLOGY TEACHERS TO THE UTILIZATION OF NEW MEDIA TECHNOLOGY FOR ACADEMIC ACTIVITIES

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Abstract

The study focused on the attitudinal disposition of agricultural science teachers to utilization of new media technology among Agricultural science and Biology teachers for academic activities in Lagos state. The study x-rayed the attitude of Agricultural science and Biology teachers to the utilization of new media technology for academic activities. A total of 250 respondents were selected with the use of multisampling selection procedure from about 13 senior secondary schools in ten local government areas which cuts across all the three senatorial district of Lagos state. The attitude of Agricultural science teachers and that of Biology teachers towards utilization of new media technology for academic activities were adjudged to be positive as respondents posits 'that hours spent online academically had better academic impact compared to hours spent on reading and that New media provides more satisfaction when using it for academic activities' for Agricultural science and Biology teachers with weighted mean score(WMS) of 3.84 and 3.86 respectively. Google plus was the most utilized new media technology among the teachers of the two subject in the study area with WMS of 2.65 and 2.60 for Agricultural Science and Biology teachers respectively. Test of difference revealed that there was no significant difference (t = -2.682, p = 0.316) in the attitude of Agricultural science teachers and Biology teachers towards utilization of new media technology for academic activities. It is therefore recommended that continue to express their positive dispositions to the utilization of the new media in order to bring about emotional connection of students and teachers toward the realization of the teaching objectives.

Keywords: Agricultural Science, Biology, teachers, New media Technology, Attitude, utilization, Academic activities

Introduction

The world today is celebrating the improvements in communication technology which has broadened the scope of communication through Information and Communication Technologies (ICTs). Modern Technology in communication no doubt has turned the entire world into a "Global village". But as it is, technology like two sides of a coin, bring with it both negative and positive sides. It helps people to be better informed, enlightened, keeping abreast with world developments and exposes mankind to a better way of doing things. Social media is that means that employs mobile and web based technology to create highly interactive platforms via which individuals and community share, co-create, discuss and modifies user-generated content (DeNoyelle, 2015).

New media is a phrase being tossed around a lot. It is a media of website that does not just give you information but interact with you while giving you information. It is a group of internet based application that allows the creation and exchange of users generated content. It is easy to confuse social media with social news because we often refer to members of the news as the media. Adding to it, that social news site is also social media site. Some new media website includes:

1. **Social Bookmarking:** interact by tagging website and searching through website book marked by others (Blink list, simple).
2. **Social News:** interact by voting for articles and commenting on them.
3. **Social Networking:** interact by adding friends, commenting on photo and profiles, sharing groups for discussions (Facebook, 2go, BB chat, etc.)
4. **Social Photo and Video Sharing:** interact by sharing photos or videos and commenting on the user submission. (YouTube and Instagram).
5. **Wikis:** interact by adding articles and editing existing articles. (Wikipedia, wikis).

New social networking sites include: Twitter, Yahoo Messenger, Facebook Messenger, Blackberry Messenger (BBM), WhatsApp messenger, 2go messenger, Skype, Google talk, Google Messenger, iPhone and Androids. These networking sites are used by most people to interact with old and new friends, physical or internet friends (Boellstroff & Kellner 2018). The world has been changed rapidly by the evolution of

technology; this has resulted into the use of technology as the best medium to explore the wide area of knowledge.

The evolution of internet technology has led to its use as the best medium for communication. Whereby, two-third of the world's internet population visits social networking or blogging sites, thus serving as a communication and connection tool. New social networking sites (SNSs) are online Communities of Internet users who want to communicate with other users about areas of mutual interest, whether from a personal, business or academic perspective (Emenanjo, (2015). The millions of new social networking sites have transformed the thought of global village into a reality whereby billions of people communicate through new social networking sites. Numerous benefits have been obtained through distant communication through the use of new social networking sites.

The performance of the students in agricultural science and practical agriculture in high schools respectively is not encouraged (Olatunji and Wigwe, 2011). They observed that the poor performance of students in Agricultural examinations may not be unconnected with non-utilization of suitable instructional media by teachers. Many teachers go to classes to teach Agricultural science, practical agriculture as well as Biology as liberal arts without any material or electronically simulated environment to assist them or the learners. Learning is facilitated when the learners make use of at least three of the sense organs namely: seeing, hearing and touching via chatting with peers in a group discussion.

Literature in methodology of teaching or pedagogy and instructional communication using new media have explained and illustrated the effectiveness of instructional media as a tool for improving students' performance in the learning of difficult concepts (DeNoylles, 2015). In spite of the role of instructional media in facilitating learning, students have failed to acquire the needed knowledge and skills in Agricultural Science (Olatunji and Wigwe (2011).

Biology is one of the core science subjects in Senior Secondary schools in Nigeria. Hence, an encouragement to learn biology especially at the senior secondary school (SSS) level is of paramount importance using new media by biology teachers as a strategy to enhance students' interest to learn thereby improving their academic activities. Olatunji and Wigwe (2011). stated that online class activities using new media such as Yahoo Messenger,

Facebook Messenger, Blackberry Messenger (BBM), WhatsApp, 2go, Skype, Google talk, Google Messenger, etc. help teachers to collaborate and learn various skills so as to gives students a sense of achievement when they themselves make discoveries and arrive at scientific conclusion through their own critical thinking on a problem.

Academic excellence or achievement in Agricultural science and Biology plays an important role in an individual placement, be it in the academic institutions or job placement. Due to this, many people are concerned with the ways they can enhance their academic achievement in Agricultural science and Biology The emphasis on academic excellence which is also prevalent worldwide has encouraged many studies about the conditions promoting it.

Statement of Problem

The world today is a global market in which the internet is the most important tool to sort information. Since the advent of social media sites in the 1990s, it is assumed in some quarters that the academic activities of teachers are facing a lot of neglect and challenges. The educational system in Nigeria is faced with so many challenges which have certainly brought about a rapidly decline in the quality of education. There are deviations, distractions and divided attentions between social networking activities and their academic works. It is observed that teachers devote more attention to new media utilization than they do to their studies. Teachers' addictiveness to social networks, teachers' frequency of exposure to social network, new media network that the teachers are more exposed to and the influence of social media learning habit as a medium of interaction between teachers have been part of discussions in recent times and which have imparted on their academic activities. Instead of teachers reading their books, they spend their time chatting and making friends via the social media and this might definitely have influence on their academic activities, because when you do not read, there is no way you can perform well academically. It is a common sight to see a teacher chatting in sensitive and highly organized places like mosques, churches, and lecture venues. Some are so carried away that even as they are walking along the high way, they keep chatting.

The manufacturing and distribution of equally sophisticated cellular phones have complicated the situation, as teachers no longer need to visit a cybercafé before they send and receive messages. Attention has

been shifted from visible to invisible friends, while important ventures like study and writing might be affected in the process. This phenomenon has become a source of worry to many who believe in knowledge and skill acquisition.

In recent times new media technology utilization by Agricultural science and Biology teachers have been a major stay in the minds of teachers and the world at large thereby causing a lot of drastic measure by students, teacher and even educational administrators at large. It is therefore of great importance to explore some of the trending issues facing teachers' academic activities as a result of new media technology utilization by Agricultural science and Biology teachers. Teachers at all levels of learning now have divided attention to studies, as a result of available opportunities to be harnessed from new media technology utilization by Agricultural science and Biology teachers. Whether these opportunities promote studies greatly depends on attitudinal disposition of the teachers to the extent of utilization of the new media technology. It is against this background that this research seeks to find answers to the following research questions.

Research Questions

1. What is the attitude of Agricultural science and Biology teachers to the utilization of new media technology for academic activities?
2. What is the extent of utilization of new media technology for academic activities among Agricultural science and Biology teachers?

Objective of the Study

1. Determine the attitude of Agricultural science and Biology teachers to the utilization of new media for academic activities
2. Ascertain the extent of utilization of new media technology for academic activities among Agricultural science and Biology teachers.

Hypothesis

H_o: There is no significant difference in the attitude of Agricultural science and Biology teachers to utilization of new media technology for academic activities.

Methodology

The study was conducted in Lagos State of Nigeria. The population of this study comprises of Agricultural science and Biology teachers in all the Local Government Areas across all the three senatorial districts

of Lagos State. A multistage sampling procedure was used to select respondents for this study. Firstly, the three senatorial districts of Lagos state were purposively selected for this study, namely Lagos West, Lagos Central and Lagos East. Secondly, 60% of the Local Government Areas in the Lagos west were selected, 30% of the Local Government Area in Lagos Central and 30% of the local government areas in Lagos East were also selected. In all, 6, 2 and 2 local government areas were selected from Lagos west; Lagos central and Lagos east senatorial district respectively, which makes it a total of ten local government areas. A total of 13 schools are chosen from each of the selected local government areas which makes it a total of 130 schools with 1 agricultural science teachers and 1 biology as respondents in each of the schools which cumulated to 260 responded for which 250(96.2%) questionnaires were retrieved and used for analysis in this study.

Results and Discussion

Attitude of Agricultural Science Teachers to the Utilization of New Media Technology for Academic activities

Table 1 shows the result of the attitude of Agricultural science teachers to the utilization of new media technology for academic activities. It was revealed that Agricultural Science teachers have better attitude to the utilization of new media for academic activities. This can be deduced from attitudinal statements such as “Hours spent online academically had better academic impact compared to hours I spend reading”; “New media can help get access to new opportunities in teaching and learning”; and “New media can help get unique idea to teaching and learning”. These statement was ranked first, second and third, with means score of 3.86, 3.65 and 3.62 respectively. This implies that new media is no less impactful in the teaching learning process. This is supported by Tindall (2015), which states that aside from social media, new media provides a variety of media for instructors’ reviews and feedbacks that make teaching and learning impactful. It must be pointed out that the statement " The use of new media technology can lead to poor writing ability in students” was ranked 15th in the distribution with a weighted mean score of 2.14. This implies that the use of new media technology by students may result in writing difficulties, inadequate vocabulary and weak tense structures by the students and this is supported by some scholars like Warreen, and Wakefield, (2018) who came to

the conclusion that social media usage results in language deterioration in that students get unconsciously accustomed to using abbreviations while chatting with other users and hence reproducing the same errors in formal writings.

Table 1: Attitude of Agricultural Science Teachers to the Utilization of New Media Technology for Academic Activities in Lagos State

S/N	Statements	SA	A	U	D	SD	WMS	Rank
1	Addiction to online network is a problematic issue that affects my academic work in school	24(19.2)	25(20)	12(9.6)	47(37.6)	17(13.6)	2.94	11th
2	Social network distracts me from my teaching activities	16(12.8)	22(17.6)	9(7.2)	52(41.6)	26(20.8)	2.60	12th
3	Hours spent online academically had better academic impact compared to hours I spend reading	60(48)	30(24)	4(3.2)	19(15.2)	12(9.6)	3.86	1st
4	There is improvement in my academic activities since I became engaged to these new media	42(33.6)	35(28)	10(8)	12(9.6)	26(20.8)	3.44	6th
5	I get used to more interactive lecture demonstration	27(21.6)	31(24.8)	7(5.6)	42(33.6)	19(15.2)	2.99	10th
6	I don't use to get bored when using new media for academic activities	13(10.4)	21(16.8)	9(7.2)	54(43.2)	28(22.4)	2.50	14th
7	New media provides more satisfaction when I am using for academic activities	23(18.4)	50(40)	15(12)	26(20.8)	11(8.8)	3.38	7th
8	I usually get new information immediately when using new media for academic activities	11(8.8)	48(38.4)	39(31.2)	11(8.8)	16(12.8)	3.22	8th
9	New media does not lead to use of good interpersonal relationship between teachers and students	52(41.6)	19(15.2)	12(9.6)	25(20)	17(13.6)	3.51	5th
10	The use of new media can lead to good communicative ability in students	22(17.6)	18(14.4)	8(6.4)	36(28.8)	41(32.8)	2.55	13th
11	The use of new media can lead to poor writing ability in students	12(9.6)	19(15.2)	4(3.2)	30(24)	60(48)	2.14	15th
12	The use of new media can help in improving reading skills in teachers and students	26(20.8)	30(24)	13(10.4)	38(30.4)	18(14.4)	3.06	9th
13	New media can easily lead to spread of social vices	50(40)	28(22.4)	4(3.2)	27(21.6)	16(12.8)	3.55	4th
14	New media can help get unique idea to teaching and learning	59(47.2)	19(15.2)	4(3.2)	27(21.6)	16(12.8)	3.62	3rd
15	New media can help get access to new opportunities in teaching and learning	54(43.2)	26(20.8)	3(2.4)	31(24.8)	11(8.8)	3.65	2nd

Source: Field Survey 2024

Attitude of Biology Teachers to the Utilization of New Media Technology for Academic Activities

Table 2 below shows the result of the attitude of Biology teachers to the utilization of new media technology for academic activities. On the list, the statement "New media provides more satisfaction when I am using it for academic activities " was ranked 1st with a weighted mean score of 3.84. This implies that the respondents believed that whenever they are using new media for teaching in the classroom or for any academic related work they enjoy it better and the students understand the teaching better. This can translate to mean that new media usage benefits both the teacher and the students and this is also supported by Tindall (2015) that states that aside from only student to student interaction, New media provides a variety of media for instructor's review and feedback leading to satisfaction. The statement " Hours spent online academically had better academic impact compared to hours I spend reading " was ranked 2nd with a weighted mean score of 3.56 and this implies that the number of hours that is spent on new media is much more beneficial than the number of hours that is spent on reading books. The statement "I don't used to get bored when using new media for academic activities" was ranked 3rd with a weighted mean score of 3.43. At the lowest rank in the distribution is the statement " New media can easily lead to spread of social vices". This was ranked 15th with a weighted mean score of 2.16. It can overtly be deduced that the attitude of Biology teachers to the utilization of new media technology for academic activities is positive.

Table 2: Attitude of Biology Teachers to the Utilization of New Media Technology for Academic Activities in Lagos State

S/N	STATEMENTS	SA	A	U	D	SD	WMS	RANK
1	Addiction to online network is a problematic issue that affects my academic work in school	19(15.2)	23(18.4)	5(4)	53(42.4)	25(20)	2.66	10th
2	Social network distracts me from my teaching activities	10(8)	25(20)	15(12)	48(38.4)	27(21.6)	2.54	13th
3	Hours spent online academically had better academic impact compared to hours I spend reading	48(38.4)	31(24.8)	8(6.4)	19(15.2)	19(15.2)	3.56	2nd
4	There is improvement in my academic activities since I became engaged to these new media	40(32)	32(25.6)	12(9.6)	15(12)	26(20.8)	3.36	4th
5	I get used to more interactive lecture demonstration	29(23.2)	28(22.4)	6(4.8)	38(30.4)	24(19.2)	3.00	8th
6	I don't use to get bored when using new media for academic activities	48(38.4)	21(16.8)	13(10.4)	23(18.4)	20(16)	3.43	3rd
7	New media provides more satisfaction when I am using for academic activities	52(41.6)	40(32)	4(3.2)	19(15.2)	10(8)	3.84	1st
8	I usually get new information immediately when using new media for academic activities	13(10.4)	46(36.8)	32(25.6)	10(8)	24(19.2)	3.11	7th
9	New media does not lead to use of good interpersonal relationship between teachers and students	11(8.8)	24(19.2)	29(23.2)	30(24)	31(24.8)	2.63	11th
10	The use of new media can lead to good communicative ability in students	21(16.8)	17(13.6)	10(8)	32(25.6)	45(36)	2.50	14th
11	The use of new media can lead to poor writing ability in students	25(20)	42(33.6)	21(16.8)	25(20)	12(9.6)	3.34	5th
12	The use of new media can help in improving reading skills in teachers and students	25(20)	28(22.4)	15(12)	36(28.8)	21(16.8)	3.00	8th
13	New media can easily lead to spread of social vices	12(9.6))	7(5.6))	10(8)	56(44.8)	40(32)	2.16	15th
14	New media can help get unique idea to teaching and learning	11(8.8)	23(18.4)	28(22.4)	34(27.2)	29(23.2)	2.62	12th
15	New media can help get access to new opportunities in teaching and learning	25(20)	43(34.4)	12(9.6)	25(20)	20(16)	3.22	6th

Source: Field Survey 2024

Extent of Utilization of New Media Technology for Academic Activities among Agricultural Science Teachers

The table 3 below shows the extent utilization of new media Technology for academic activities among Agricultural science teachers. Google plus, YouTube and Online journals were ranked 1st, 2nd and 3rd with a weighted mean score of 2.65, 2.55 and 2.40 respectively. This implies that that most Agricultural science teachers make use of Google plus, YouTube and Online journals more than the other new media. Vlogs was ranked 15th on the table with a weighted mean score of 0.77. This implies that vlog is the least utilized new media component by Agricultural Science teachers for academic activities.

Table 3: The Extent of Utilization of New Media Technology for Academic Activities among Agricultural Science Teachers

S/N	NEW MEDIA COMPONENTS	OFTEN USED	SOMETIMES USED	RARELY USED	NEVER USED	WMS	RANK
1	Websites	71(56.8)	27(21.6)	19(15.2)	8(6.4)	2.29	4TH
2	Blogs	29(23.2)	48(38.4)	11(8.8)	37(29.6)	1.55	13TH
3	Emails	53(42.4)	34(27.2)	25(20)	13(10.4)	2.02	8TH
4	WhatsApp	61(48.8)	32(25.6)	21(16.8)	11(8.8)	2.14	5TH
5	Facebook, twitter	51(40.8)	39(31.2)	29(23.2)	6(4.8)	2.08	6TH
6	Online newspapers	57(45.6)	34(27.2)	20(16)	14(11.2)	2.07	7TH
7	Wikis	34(27.2)	38(30.4)	40(32)	13(10.4)	1.74	10TH
8	Podcasts	28(22.4)	24(19.2)	12(9.6)	61(48.8)	1.15	14TH
9	Vlogs	13(10.4)	18(14.4)	21(16.8)	73(58.4)	0.77	15TH
10	Webinars	27(21.6)	39(31.2)	39(31.2)	20(16)	1.58	11TH
11	YouTube	94(75.2)	15(12)	7(5.6)	9(7.2)	2.55	2ND
12	Skype	37(29.6)	38(30.4)	40(32)	10(8)	1.82	9TH
13	Google plus	91(72.8)	27(21.6)	4(3.2)	3(2.4)	2.65	1ST
14	Academic websites	32(25.6)	28(22.4)	46(36.8)	19(15.2)	1.58	11TH
15	Online journals	80(64)	22(17.6)	16(12.8)	7(5.6)	2.40	3RD

Source: Field Survey 2024

Extent of Utilization of New Media Technology for Academic Activities among Biology Teachers

The table 4 below shows the utilization of new media Technology for academic activities among Biology teachers. Unlike what was discovered among Agricultural Science Teachers, Google plus, WhatsApp, as well as YouTube, Facebook & twitter were ranked 1st, 2nd and 3rd with a weighted mean scores of 2.60, 2.58 and 2.35 respectively. This implies that google plus, WhatsApp, YouTube, and Facebook & twitter were the most utilized new media technology among Biology teachers for academic activities. This implication might be as a result of the fact that using them in the

classroom as a teacher makes it easy to customize assignments for individual students or small groups. A number of researchers lay bare their findings. For instance, Akpan, Enobong and Nsikan (2013) sees Facebook & twitter as platforms on which different range of activities take place as well as locations for interaction among individuals, groups and communities. Podcast is the least ranked on the table with a weighted mean score of 0.29. This implies that podcast is the least utilized new media technology by Biology teachers amongst in the study area.

Table 4: The Extent of Utilization of New Media technology for Academic Activities among Biology Teachers

S/N	NEW MEDIA COMPONENTS	OFTEN USED	SOMETIMES USED	RARELY USED	NEVER USED	WMS	RANK
1	Websites	67(53.6)	35(28)	16(12.8)	7(5.6)	2.30	6TH
2	Blogs	21(16.8)	34(27.2)	49(39.2)	21(16.8)	1.44	12TH
3	Emails	78(62.4)	20(16)	15(12)	12(9.6)	2.31	5TH
4	WhatsApp	92(73.6)	19(15.2)	9(7.2)	5(4)	2.58	2ND
5	Facebook, twitter	78(62.4)	25(20)	10(8)	12(9.6)	2.35	3RD
6	Online newspapers	48(38.4)	59(47.2)	13(10.4)	5(4)	2.20	7TH
7	Wikis	47(37.6)	32(25.6)	30(24)	16(12.8)	1.88	10TH
8	Podcasts	2(1.6)	3(2.4)	24(19.2)	96(76.8)	0.29	15TH
9	Vlogs	25(20)	22(17.6)	36(28.8)	42(33.6)	1.24	14TH
10	Webinars	34(27.2)	38(30.4)	25(20)	28(22.4)	1.62	11TH
11	YouTube	84(67.2)	16(12.8)	10(8)	15(12)	2.35	3RD
12	Skype	63(50.4)	31(24.8)	16(12.8)	15(12)	2.14	9TH
13	Google plus	98(78.4)	11(8.8)	9(7.2)	7(5.6)	2.60	1ST
14	Academic websites	65(52)	30(24)	19(15.2)	11(8.8)	2.19	8TH
15	Online journals	26(20.8)	30(24)	39(31.2)	30(24)	1.42	13TH

Source: Field Survey 2024

Test of Hypothesis

H_o: There is no significant difference in the attitude of Agricultural science and Biology teachers to utilization of new media technology for academic activities.

Table 5: Test of difference between the attitude of Agricultural science and Biology teachers to utilization of new media technology for academic activities

Variable	Mean Difference	t	Df	p	Decision
Attitude to utilization of new media	-4.01	-2.682	248	0.316	Not significant

The table 5 above revealed that the results of the test of difference between attitude of Agricultural science and Biology teachers to utilization of new media technology for academic activities. The result shows that there was no significant difference (t = -2.682, p = 0.316) in the attitude of Agricultural science teachers and Biology teachers towards utilization of new media technology for academic activities. This means that Agricultural science and Biology teachers in the study area do not differ significantly in their attitude towards the utilization of new media for academic activities. This result is supported by the research of Rishav, Katan, Agnjj Riya, Shubhendu and Swati (2023) that reported that the use of new media is determined by the teacher's attitudes and expectations. Aydogmus, Tut and Karadag. (2023) also believed strongly that teachers attitude drive social media use in teaching and learning either positively or negatively.

Conclusion and Recommendations

This study explores majorly the attitude of Agricultural Science and Biology teachers to the utilization of new media technology in the teaching and learning process. It should be noted that teachers' willingness to use any technology in teaching must be borne out of his/her attitude towards the technology. This study found out that Agricultural Science and Biology teachers now adopt utilization of new media with google plus being the most utilized new media among the teachers of the two subject in the study area. It is therefore recommended that teachers should endeavor to use a variety of technological options to enhance the teaching learning process. In addition, teachers should continue to express their positive dispositions to the utilization of the new media in order to bring about emotional connection of students and teachers toward the realization of the teaching objectives.

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