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Research Article

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Effective Use of Remote Learning in Sustaining Teaching and Learning of Fine and Applied Arts in Covid-19 Era In Colleges of Education

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Abstract

The study determined how remote learning can be used effectively in sustaining teaching and learning of fine and applied arts in colleges of education in Benue State, Kogi States, and Enugu State, Nigeria. We adopted a cross-sectional survey for the study. We used a sample size of 218 respondents for the study. We used a structured questionnaire for the study. We used frequency percentage and Chi-square analysis. Moreover, four hypotheses were tested. The finding of the study showed that the ICT devices are not available, respondents do not use the effective technique for teaching and learning fine and applied arts in remote learning, that respondents ascertained that there are challenges concerning the use of technology in the teaching and learning of fine and applied arts, and respondents agree on the solutions in mitigating the adverse effect of COVID-19 lockdown on teaching and learning of fine and applied arts. We highlighted the educational implications of the findings and the recommendations. We also made some limitations of the study and suggestions for further studies.

Keywords: COVID-19, Remote learning, Fine and Applied Arts

Introduction

Coronavirus sickness (covid-19) is an infectious illness because of a newly found coronavirus. The majority who fall unwell with COVID-19 will revel in trivial to slight signs and symptoms and recover without a vivid remedy. The virus that causes COVID-19 especially spread via droplets generated while an infected person coughs, sneezes, or exhales. These droplets are too heavy to grasp inside the air and fast fall on flooring or surfaces. One can settle the ailment via respiratory within the virus if humans are inside proximity of someone who has COVID-19, or by touching an infected surface after which someone's eyes, nostril or mouth. Covid-19 is an unusual strain of coronavirus infection because of excessive acute respiration syndrome coronavirus 2 (SARS-CoV-2) [1]. Covid-19 broke out in Wuhan, China on December 30, 2019. Because it came about in 2019, the World Health Organization (WHO) gave it the term COVID-19. It became declared as an international pandemic on March 11, 2020 [2].

With the outbreak of the pandemic, governments across continents took very strict measures centred on containing the spread of the virus. Among those measures taken, the indefinite closure of public settings like places of work, banks, markets, commercial centres, banks and establishments of learning like secondary faculties, colleges of education, universities, and different tertiary institutions became a part of it [3]. Research has shown that as of September 30, 2020, about 1.077 billion trainees are currently affected because the federal government closed the schools in response to the disease. According to UNICEF observations, 53 nations are currently imposing national closures and 27 are commanding neighbourhood closures, affecting about 61.6 percent of the world's learned population, whilst 72 international locations' colleges are currently open [4].

Remote learning is where the student and the teacher, or data supply, are not bodily present in a conformist classroom setting. Information is conveyed through technology, which includes discourse forums, videoconferencing, and online assessments. Remote learning ensues synchronously with immediate, peer-to-peer relationships and partnership or asynchronously with self-paced getting to know learning that takes place individualistically of the teacher. Remote learning can be done synchronously, with every person online either at the same time or asynchronously, with students gaining access to the equal lesson at distinctive times. However, it also permits lecturers and college students to hold connections and experience part of a collection, which is more vital now than ever. With younger college students, asking parents to supervise

asynchronous learning can be a catastrophe.

College closures affected not longer the most effective students and instructors' academic activities but also households [5]. The effect became greater extreme for deprived children and their families, inflicting interrupted getting to know, compromised vitamins, childcare problems, and consequent monetary price to families who couldn't paintings [4]. in response to school closures, UNESCO endorsed the usage of distance gaining knowledge of programmes, which is likewise referred to as remote studying and open instructional applications and platforms that colleges and teachers can use to attain freshmen remotely and restrict the disruption of schooling [6] . Distance education, also referred to as distance learning or remote studying, is the training of students who won't usually be a bodily gift at a college. Traditionally, this involved correspondence guides wherein the student corresponded with the college via put up. Nowadays, it entails online training. Faraway gaining knowledge refers to academic activities which have a ramification of formats and strategies, most of which take place online. There are several online alternatives available for speaking with college students, gathering assignments, and distributing academic material. Remote learning occurs whilst the learner and instructor, or supply of information, are separated with the aid of time and distance and therefore can not meet in a traditional classroom placing. Records are normally transmitted through generation (electronic mail, discussion boards, videoconference, and audio bridge) so that no physical presence in the classroom is needed; in any other case, it would be hybrid or combined mastering. Remote studying can arise synchronously or asynchronously.

The commonplace functions of any shape of remote gaining knowledge of are the instructor-learner separation with the aid of space or time, or each, and using media and technology to allow communique and trade of the studying procedure. Far-flung mastering gives novices who are not in a physical region for in-character training, access to online educational materials. This will be completed through print-primarily based mastering substances, or one-manner huge broadcasting (TV and radio programmes), or via the web-based exchange the use of social media channels, or gaining knowledge of platforms.

The achievement of far off getting to know lies in a supportive infrastructure maintained via the district, administrators, and instructors alike. Remote gaining knowledge of works best whilst all gears within the gadget are turning nicely and efficiently while each element of the education world is prepared and prepared to help each other in the technical and general fine details of faraway gaining knowledge of.

Going by this selection, far off studying calls for now not the handiest electricity however additionally get the right of entry to both statistics connectivity and the devices like smartphones, tablets, laptop's, laptops, TV, and radio via which the learning materials may be accessed. These are in quick delivery in many components of Africa [7]. in Nigeria, the adoption of faraway mastering within the coaching and getting to know process throughout and after the lockdown, at all degrees of schooling and subject suffered a few setbacks. That is because of inaccessibility, unavailability and price related to its infrastructures vital for remote gaining knowledge of [8]. Other than the value, bad power delivery, distractions, network troubles and bad virtual capabilities on the part of instructors had been additionally many of the many demanding situations hindering the powerful use of faraway gaining knowledge of [8]. Because of these and many problems, educators, freshmen and parents could not correctly make use of the potentials of far-flung getting to know.

Like each different instructional programme, pleasant and implemented arts turned into now not exempted from the many challenges currently hindering effective use of far-flung gaining knowledge of. Stewart [9] posit that coaching practical artwork publications like first-class and carried out arts through distance getting to know has usually been an undertaking for each teacher and student because exceptional and carried out arts courses require that students create and post visual substances for evaluation and statement. College students may additionally find it hard to develop to an internet environment that is predominantly textual content-primarily based. Using multimedia, together with these slides shows, will beautify the gaining knowledge of the experience of auditory and visual freshmen. Multimedia (pictures, audio and video) on the internet has made it possible to train visual art in a virtual environment [10]. But, they have documented little regarding teaching visible art online. Incorporating multimedia (textual content, photos, audio and video) offers extra possibilities to supply an enriched mastering environment to online students.

Even though there are already current troubles facing great and implemented arts schooling in Nigerian schools of schooling. Prominent among them are the lack of qualified artwork instructors, insufficient teaching facilities and funding, poor government and societal attitude toward the issue among others. Lee mentioned that arts are critical, but enrichment training frequently contains physical substances, organized sports, or even audiences [11]. The requirements for first-rate and carried out arts coaching and getting to know necessities are not effortlessly met in digital environments. Teachers normally serve over one grade and classes that require differentiated lecture plans.

There are a few apparent dangers to running online in great and carrying out arts. Considerably, the dearth of face-to-face contact between academics and students, and losing the interaction between college students that paperwork an important part of any study room-based enjoy is lacking. Despite the efforts of the schools to foster an immersive and educational environment, the branch also acknowledges that it cannot replicate remotely a few instructions and reviews and may adjust its elegance offerings thus. All efforts need to be made for mediums and materials to be designed for extra conducive to remote learning and more accessible

for college kids at domestic. In place of darkroom photography, lecturers can educate digital photography online. In addition, the branch can change printmaking courses that use an etching facility for using woodcut or a one-of-a-kind printmaking method that can be achieved at domestic.

Though, Stewart located that any potential negative aspects are some distance outweighed with the aid of the advantages [9]. In the online studio, the lecturer can supply as much time as is important to college students and can deliver him or her alongside at a tempo, which is proper to them as people. The lecturers can confer and are looking for each other's recommendations about pupils' paintings and development. It has continually been the academics keen to strain that they no longer keep in mind the availability superior to the lecture room enjoyment. What they provide is flexibility. But, the blessings encompass the truth that the students do now not must compete with their peers for teachers' attention or bear the distractions that may occasionally be a part of the group experience.

To facilitate their attempt, the first-class and implemented arts branch in schools of education within the look at the area will even use productivity software called Padlet with which college students can seamlessly proportion their paintings for in-magnificence reviews and construct expert portfolios. Scanga emphasized that scholars will discover ways to percentage their works online. That is an essential ability for graphic designers, photographers, and artists who make public commissions.

Regardless of all these troubles, the outbreak of the COVID-19 pandemic served as a revelation to every stakeholder of exceptional and applied arts training, at the want for them to reposition all this is required for the powerful use of far-flung studying in the teaching of fine and applied arts in colleges of education in Nigeria. Michael Moore hooked up the concept of transactional distance in 1980. This theory articulates the idea that distance education is not certainly a geographic separation of rookies and instructors, but is a pedagogical concept. More factors out that once speaking approximately distance schooling is talking approximately a teaching environment wherein the separation between the teacher and learner are substantial enough that unique teaching-gaining knowledge of strategies and strategies need to be used. With this, it turned out it was possible to use far-flung studying to train pleasant and applied arts to preserve its schooling. Though, this turned into no longer without some problems. This is this look at. Right here, the researchers created a complete overview of distance mastering, replete with faraway learning examples, descriptions of how far off studying works, reasons of many styles of distance gaining knowledge of, examples of faraway mastering, analysis of the advantages and downsides surrounding distant learning, and greater.

Research Questions

1. What are the available ICT devices that provide the best prospect for teaching fine and applied arts?
2. What is the effective technique used for teaching fine and applied arts in remote learning?
3. Are there challenges concerning the use of technology in the teaching of fine and applied arts?
4. Are there solutions in mitigating the adverse effect of COVID-19 lockdown on the teaching of fine and applied arts?

Hypotheses

1. The relationship between participants and ICT devices that provides the best prospect for the teaching of fine and applied arts is not statistically significant.
2. There is no significant relationship between participants and effective techniques used for the teaching of fine and applied arts in remote learning.
3. The relationship between participants and challenges concerning the use of technology in the teaching of fine and applied arts is not significant.
5. There is no significant relationship between Participants and solutions in mitigating the adverse effect of COVID-19 lockdown on the teaching of fine and applied arts.

Method

Description of the Study Location

We did the study in Benue State, Kogi State and Enugu State, Nigeria. Benue State occupies 34,059 km2 approximately. Benue State has a boundary on the south by Cross River, Ebonyi, and the Enugu States, in the west by Kogi State, in the north by Nassawara State, and in the NorthEast by Taraba State. The area is occupied by the Tiv the Idoma.The area of Kogi Stateis 29,833km2. It has a boundary with NassawaraState and Kogi State in the northeast; Benue to the East; Enugu State, Anambra State, and Delta State to the south; Ondo State, Ekiti State, and Kwara State to the west; and Niger State to the north. Abuja federal capital territory additionally borders Kogi to the north. They are Igbira people. And the geographical area of Enugu State is 7, 161km2. It has boundaries with Kogi State and Benue State in the north, Enugu State, and Ebonyi State in the east, Abia State in the south, and Anambra State in the west. They are mainly Igbo people.

Study Design and Population

We used a cross-sectional survey design (Fraenkel & Wallen, 2009). The sampling frame, from the colleges of education, records comprised all the fine and applied arts college students (447) and academics (61), whilst those randomly decided on (224) through the proportional to length sampling method has been the observed population. The colleges of education had been a College of Education Ankpa, Benue State; Federal College of Education, Okene, Kogi State; and College of Education Technical, Enugu State.

Sampling Technique

We used a stratified sampling method. The whole number of respondents in the colleges of educationwas obtained through a proportional sampling to size approach. The summation of the two categories of respondents (508) became used to calculate propor-

tions for lecturers (61), and college students (447) respectively. We have stratified the respondents into colleges of education based on their representativeness (range), with simple random sampling used to discover respondents among various schools within the college of education Ankpa, Benue State; Federal College of Education, Okene, Kogi State; and College of Education Technical, Enugu State respectively. Underneath put forward, the population spread in line with the colleges of education:

	STUDENT	LECTURER	TOTAL
COE, Ankpa	133	18	151
FCE, Okene	162	23	185
COET, Enugu	152	20	172

Sample Size Determination

The taro Yamané's components below become used to calculate the pattern size of the respondents that took part in the observation. In step with Taro Yamané for a 95% self-assurance degree and p = 0.05, the dimensions of the pattern need to be.

$$n = \frac{N}{1 + N\,(e^2)}$$

Where *N* is the population size and e is the level of precision.

We used this formula for the population, in which *N* = 508 with ±5% precision.

Assuming a 95% confidence level and *p* = 0.5, we get the sample size as

$$n = \frac{508}{1 + 508\,(.05)^2} =$$

The desired sample size n = 224

We calculated sample sizes for different schools from their respective population, which we gathered during our investigation. The calculations below show the sample values and their respective proportions.

COE, Amkpa (151/508)100%) = 30%
(30/100) (224) = 67

FCE, Okene (185/508)100%) = 36%
(36/100) (224) = 81

COET, Enugu (172/508)100%) =34%
(34/100) (224) = 76

However, out of 224 respondents, 218 were eventually used for the study. Six of the respondents did not submit their questionnaires. 43 (20%) lecturers and 175 (80%) were used for the study.

Data Collection and Analysis

We conducted the study between February and April 2021. The study utilized an improved version of the validated data collection questionnaire. The study instruments were pretested at a dissimilar college of education from the one we used for the study. The college of education is similar to the colleges of education we used for the study. We had corrected earlier errors and ambiguous questions before field data collection.

Materials

The study instruments had sections on demographic data, available ICT devices, effective techniques, challenges and solutions in mitigating the adverse effect of COVID-19 in the teaching of fine and applied arts. The researchers prepared thequestionnaire, Effective Use of Remote Learning(EURL). The respondents returned filled instruments that were used in the study; a response rate of 97%.

Data Analysis

We checked and cleaned the information amassed for completeness and accuracy. The questionnaires had been coded, entered, and analyzed using IBM-SPSS version 25. We tested the data within the questionnaires for internal consistency and had a completely excessive Cronbach's α value of 0.91, which suggests a high degree of internal consistency for our scale that comprised 59 study items. We presented demographic characteristics and other univariate variables through summary facts using frequency/percentages for categorical variables.

Likewise, the questionnaire correspondingly had 17, 13, 24, and 5 items on available ICT devices, effective technique, challenges and solutions. The available ICT devices were measured by a 2-point scale: "Available," "Not Available," for research questions 1; effective techniques were measured by a 2-point scale: "Use," "Not Use," for research question 2; challenges were also measured by a 2-point scale "Challenge." "Not a Challenge," for research question 3 while solutions were measured by a 2-point scale "Agree," "Disagree" for research question 4.

For bivariate analysis, Chi-square statistics were used to measure the type of association between respondents and available ICT devices, effective techniques, challenges, and solutions by the Pearson Chi-square statistics, with the level of significance at <5 %.

Inclusion and Exclusion Criteria

This study was limited to three colleges of education in Benue State, Kogi State and Enugu State, Nigeria that offer fine and applied arts and other art-related courses. The three colleges of education were Federal College of Education, Okene, College of Education Ankpa and College of Education Technical, Enugu.

Demographic Characteristics of Respondents

We presented the demographic features of respondents in Table 1. The study revealed that over half (218) respondents were students while 56 % were females. The mean age (SD) of respondents was 37.58 ± 20.18 years, while 117 (53.67 %) were between 17 and 28 years. In this research, students were 80% and lecturers 20%.

Table 1: Demographic Characteristics of Respondents

Description of variables	Frequency (n)	Percentage (%)
The age range of respondents (n = 218)		
≤17	71	32.6
18-28	46	21.1
29-38	39	17.9
39-48	30	13.8
49-58	21	9.6
59-68	11	5
Gender (n = 218)		
Male	96	44
Female	122	56
Respondents (n = 392)		
Students	175	80
Lecturers	43	20

Results

Effective Use of Remote Learning in Sustaining Teaching of Fine and Applied Arts

Data in Table 2 on the availability of ICT devices that provide the best prospect for teaching and learning fine and applied arts showed the scores of items 1, 2, 3, 4, 5, 9, 10, 12, 13, 14, 15, 16, and 17. These scores showed that items 1, 3, 5, 7, 13 and 15 are available ICT devices while items 2, 4, 6, 8, 9, 10, 11, 12, 14, 16 and 17 revealed that the ICT devices are not available. However, Table 3 indicated that items 18 to 30 with a low percentage below 50% underuse. These scores showed that respondents do not use the effective technique for teaching fine and applied arts in remote learning. The data in Table 4 showed that items 31 to 54 with high frequency and percentage above 50% under Challenge. These scores indicated that respondents established that there are challenges concerning the use of technology in the teachingof fine and applied arts. Besides, Table 5 showed that items 55 to 59 with high frequency and percentage above 50% under Agree. These scores showed that respondents agree on the solutions in mitigating the adverse effect of COVID-19 lockdown on teaching fine and applied arts.

Table 2: Frequency Percentage of Respondents on the Available ICT Devices That Provide the Best Prospect for the Teaching of Fine and Applied Arts in Colleges of Education (n = 218)

S/N	ITEM	Available		Not Available	
		Frequency	Percent	Frequency	Percent
1.	Basic mobile phone	178	81.7	40	18.3
2.	Smart feature phone	67	30.7	151	69.3
3.	Smartphone	169	77.5	49	22.5
4.	Tablet	81	37.2	137	62.8
5.	Desktop/Laptop Computers	127	58.3	91	41.7
6.	Digital Camera	52	23.9	166	76.1
7.	Multimedia Projector	128	58.7	90	41.3
8.	Radio	93	42.7	125	57.3
9.	Television	63	28.9	155	71.1
10.	Interactive Smartboard	45	20.6	173	79.4
11.	Microphones	88	40.4	130	59.6
12.	Scanners	86	39.4	132	60.6
13.	Printers	203	93.1	15	6.9
14.	Light Pen	16	7.3	202	92.7
15.	MP3/MP4	139	63.8	79	36.2
16.	VCD/DVD Player	1	5	217	99.5
17.	IPads	18	8.3	200	91.7

*KEY: Benchmark for **Available**: 1- 49% = Not Aware, 50 – 100% = Available; then for **Not Available**: 1-49% = Available, 50 – 100% = Not Available*

Table 3: Frequency Percentage of Respondents on the Effective Technique Used For The Teaching of Fine and Applied Arts in Remote Learning (n = 218)

S/N	ITEM	Use		Not Use	
		Frequency	Percent	Frequency	Percent
18.	Get to know your platform	39	17.9	179	82.1
19.	Create an online classroom environment	50	22.9	168	77.1
20.	Engage with your learners online	51	23.4	167	76.6
21.	Be organized	55	25.2	163	74.8
22.	Use a variety of instruction strategies	74	33.9	144	66.1
23.	Be present	64	29.4	154	70.6
24.	Provide ongoing feedback	71	32.6	147	67.4
25.	Collaborate with other teachers	49	22.5	169	77.5
26.	Reflect the lessons	36	16.5	182	83.5
27.	Maximize your professional development	58	26.6	160	73.4
28.	Use online resources	34	15.6	184	84.4
29.	Establish your presence right away	70	32.1	148	67.9
30	Make your assignments clear	93	42.7	125	57.3

*KEY: Benchmark for **Use**: 1- 49% = Not Use, 50 – 100% = Use; then for **Not Use**: 1-49% = Use, 50 – 100% = Not Use*

Table 4: Frequency Percentage of Respondents on Challenges Concerning the Use of Technology in the Teaching of Fine and Applied Arts (n = 218)

S/N	Challenges	Challenge		Not a Challenge	
		Frequency	Percent	Frequency	Percent
31.	Professional training	172	78.9	46	21.1
32.	Resistance to change	158	72.5	60	27.5
33.	Network infrastructure	125	57.3	93	42.7
34.	Unrialable device/software options	164	75.2	54	24.8
35.	Scheduling problem	140	64.2	78	35.8
36.	Poor online contents	158	72.5	60	27.5
37.	Technical issues	191	87.6	27	12.4
38.	Learners being left behind	149	68.3	69	31.7
39.	Distractions	183	83.9	35	16.1
40.	Lack of in-person interaction	110	50.5	108	49.5
41	Staying motivated	158	72.5	60	27.5
42.	Understanding course expectations	147	67.4	71	32.6
43.	Time management	183	83.9	35	16.1
44.	Adaptability struggle	190	87.2	28	12.8
45.	Computer literacy	154	70.6	54	29.4
46.	Online learning is boring	177	81.2	41	18.8
47.	Technical difficulties	158	72.5	60	27.5
48.	Time for online training	115	52.8	103	47.2
49.	Unfamiliar technology	183	83.0	35	16.1
50.	Uncertainty about the future	157	72.0	61	28.0
51.	Personalized learning	175	80.3	43	19.7
52.	Formative assessment	170	78.0	48	22.0
53.	MOOCS	150	68.8	68	31.2
54.	Informal learning	86	39.4	132	60.6

*KEY: Benchmark for **Challenge**: 1- 49% = Not a Challenge, 50 – 100% = Challenge; then for **Not a Challenge**: 1-49% = Challenge, 50 – 100% = Not a Challenge*

Table 5: Frequency Percentage of Respondents on the Solutions in Mitigating the Adverse Effect of COVID-19 Lockdown on the Teaching of Fine and Applied Arts (N = 147)

S/N	Solutions	Agree		Disagree	
		Frequency	Percent	Frequency	Percent
55.	Government collaboration with telecommunication service providers to and ICT devices to subsidized internet bundles and cost of procurement	188	86.2	30	13.8
56.	Investment in human and institutional capacity on effective utilization of technology for teaching and learning by government and private organization	191	87.6	27	12.4
57.	Enhanced the curriculum of fine and applied for arts programme with eLearning	172	78.9	46	21.1
58.	Provision of enabling environment to boost distance learning	166	76.1	52	23.9
59.	Improve internet connectivity	184	84.4	34	15.6

*KEY: Benchmark for **Agree**: 1- 49% = Disagree, 50 – 100% = Agree; then for **Disagree**: 1-49% = Agree, 50 – 100% = Disagree*

The Measure of Association Among Demographic Indices and Effective Use of Remote Learning in Sustaining Teaching of Fine and Applied Arts in The COVID-19 era

The study showed statistically significant associations between respondents and available ICT devices c2 = .3.890, 1, p = .049 as shown in Table 6 while the association of respondents and effective technique used for the teaching of fine and applied arts in remote learning was not significant c2 = .423, 1, p = .515 (Table 7). As well, Table 8 revealed the association of respondents and challenges concerning the use of technology in the teaching of fine and applied arts was not significant c2 = .138, 1, p = .710 whereas respondents associated with the solutions in mitigating the adverse outcome of COVID-19 lockdown on the teaching of fine and applied arts were statistically significant c2 = 4.205, 1, p = .040 as shown in Table 9.

Table 6: Relationship Between Participants and ICT Devices that Provides the Best Prospect for Teaching and Learning of Fine and Applied Arts

RESPONDENTS	AVAILABLE	NOT AVAILABLE	TOTAL
Students	50 (28.6%)	125 (71.4%)	175
Lecturers	19 (44.2%)	24 (55.8%)	43

Chi-Square, $c^2 = 3.890$, 1, $p = .049$ (Significant)

Table 7: Relationship Between Participants and Effective Technique Used for the Teaching of Fine and Applied Arts in Remote Learning

RESPONDENTS	AVAILABLE	NOT AVAILABLE	TOTAL
Students	56 (32.0%)	119(68.0%)	175
Lecturers	16 (37.2%)	27 (62.8%)	43

Chi-Square, $c^2 = .423$, 1, $p = .515$ (NotSignificant)

Table 8: Relationship Between Participants and Challenges Concerning the Use of Technology in the Teaching of Fine and Applied Arts

RESPONDENTS	AVAILABLE	NOT AVAILABLE	TOTAL
Students	131 (74.9 %)	44(25.1%)	175
Lecturers	31 (72.1%)	12(27.9%)	43

Chi-Square, $c^2 = .138$, 1, $p = .710$ (Not Significant)

Table 9: Relationship Between Participants and Solutions in Mitigating the Adverse Effect of COVID-19 Lockdown on the Teaching of Fine and Applied Arts

RESPONDENTS	AVAILABLE	NOT AVAILABLE	TOTAL
Students	134(76.6%)	41 (23.4%)	175
Lecturers	39(90.7%)	4 (9.3%)	43

Chi-Square, $c^2 = 4.205$, 1, $p = .040$ (Significant)

Discussion

The research objective was on the effective use of remote learning in sustaining teaching of fine and applied arts in the covid-19 era in colleges of education in Benue State, Kogi State and Enugu State, Nigeria. The results showed that the ICT devices are not available for teaching fine and applied arts, The lecturers do not use the effective technique for teaching fine and applied arts in remote learning, respondents ascertained that there are challenges concerning the use of technology in the teaching fine and applied arts, and they also agree on the solutions in mitigating the adverse effect of COVID-19 lockdown on teaching fine and applied arts. This was indicated by high percentage ratings by the participants. The study also revealed a statistically significant relationship between participants and the ICT devices: c2 =.3.890, 1, p = .049. The relationship between participants and effective techniques used for teaching fine and applied arts in remote learning was not significant c2 = .423, 1, p = .515. The relationship between participants and challenges concerning the use of technology in the teaching fine and applied arts was not significant c2 = .138, 1, p = .710 and the relationship between participants and the solutions in mitigating the adverse effect of COVID-19 lockdown on teaching fine and applied arts were statistically significant c2 = 4.205, 1, p = .040

This may have led them not to make available technologies and other facilities that will enhance effective teaching in the schools in this COVID-19 era. It could also be as a result that the school authorities fail to see the need to equip schools with adequate remote learning facilities for proper teaching fine and applied arts. It is quite alarming lecturers do not use effective techniques for teaching fine and applied arts in remote learning. This may have been caused by not possessing the required skills in content delivery using modern technologies associated with remote learning. Some of the lecturers and students are still analogue in handling

the ICT equipment and facilities. Where there are some of this ICT equipment and facilities, they usually pack them in a safe place in the schools for fear of damages without making use of them. There is a shortage of technical officers and technologists that can assist the lecturers and students in using these facilities for teaching fine and applied arts.

Challenges are hindering the effective use of remote learning. This may be because schools do not have enough preparation for this sudden change caused by COVID-19 lockdown in content delivery through an online format. The schools were closed with very short notice. Hence, modern ICT equipment and materials were not on the ground for an effective take off for remote learning. The lecturers and students were not given enough time to train maximally for the new approach to learning. They resorted to be using the one they could lay their hands on which is grossly appropriate for remote learning. The study also found out some measures every stakeholder in the education business should imbibe for efficient and effective remote teaching and learning of fine and applied arts in colleges of education. These measures if given necessary attention will ensure a very smooth implementation of remote learning in the colleges of education [12-14].

Conclusions

Based on the findings, it was concluded that the ineffective use of technology in the teaching and learning of fine and applied arts in colleges of education stem from government insensitivity to the importance of technology in education. Several devices like smart feature phones, smartphones, tablets, PC's, laptops, projectors, radio and TV. These devices have been confirmed to be effective in aiding education in or out of class. Remote learning can be used for effective and efficient teaching fine and applied arts if infrastructures such as devices, network connection, data bundles and power are readily available and accessible by students and teachers.

Recommendations

1. The paper recommends the government should collaborate with telecommunication service providers to subsidize internet bundles so that more people can have access to data.
2. Educators like lecturers of fine and applied arts need to be trained in digital skills. This will go a long way in adding to the nation's human capital.
3. There is also a need for the government to support the educational institutions with adequate infrastructures needed for the effective implementation of online classes.

Declarations

Funding

There was no funding for the study.

Consent

We agreed with all individual participants involved in the study.

Competing interests

The authors affirmed they have no rival interests.

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Author Contributions

All the authors contributed to the study development and design. Chris Ibenegbu accomplished fabric help, statistics series, and assessment. Chris Ibenegbu wrote the primary draft of the document and Juliet remarked on the former differences of the manuscript. All the authors scrutinized and accepted the finished manuscript.

Data Availability

The data set we produced during and/or analyzed during the present study are not overtly available because of privacy matters but can be collected from the corresponding author if demanded.

Ethical Approval

We got both verbal and written authorization from the participants. The parents/ guardians of the students below the age of 18 years delivered both verbally and in written accord on their behalf. Their involvement was voluntary. Postgraduate Studies Review Board, University of Nigeria, Nsukka, accepted the study technique.

Before participants' verbal agreement, we informed them about the objective of the research and we made them comprehend that involvement was intentional and denial to take part in the study attracts no consequence. We guaranteed the privacy of the study participants of privacy and we detached individual identifiers in the summary data to guarantee discretion.

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