

CHAPTER ELEVEN

Teaching in a COVID-19 Age: Guidelines for Designing Teaching and Learning**Yusuf Danladi Mohammed**Faculty of Education,
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Kurfi**Abstract**

The primary goal of designing as well as delivering school instructional process is to ensure pupils' / students' intellectual, good moral virtues and values, spiritual and skills growth and development that will enhance their capabilities to fight COVID-19 global pandemic. This chapter outlined some vital guidelines for teachers in Basic Education as well as secondary schools to adhere for integrating the use of Information and Communication Technology gadgets like television, radio, computer sets and smart-phones to plan and deliver the teaching programmes primarily to ensure that pupils and students continue with their learning in various arts, commercial, science and technical school subjects at the time of stay-at-home policy. A review of definitions of the teaching and learning and its approaches was considered. It also analyzed the outbreak of COVID-19 pandemic, the policy measures put in place by the Nigerian government side-by-side their consequential effect upon the education system of the country. Conclusively, educators are charged with ethical and moral obligations of imbibing use of modern gadgets of Information and Communication Technology (ICT) which enable them explore the assets in variegated media and social media platforms to achieve continuity in planning and delivering all instructional engagements at all levels of Nigerian education system. It was recommended that virtual teaching pedagogy requires educators to acquire some professional skills to utilizing both high – technology and low-technology for the efficient, effective and purposeful planning and delivery of e – teaching – learning programme.

Keywords: Design, Instructional Process, Teaching, Learning, COVID-19**Introduction**

The outbreak of corona virus can be described as one of the major catastrophes the world had ever encountered. The deadly ailment which elicits its ravaging economic, academic, social as well as medical challenges, not only that but it also culminated in outrageous death especially, in Europe,

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

America, Caribbean, Asia and Arabian populations. Following an analytic study on the culture of Corona ailment, World Health Organization (WHO) declared it as ‘COVID-19’ and by this, the Corona epidemic was classified as world – wide pandemic that defied all sorts of cure (World Bank Group, 2020:4). Efforts at taming the further spread of Corona virus, led governments across the globe to opt to shutting down public places and order the populace to stay at homes (UNICEF, WHO & IFRC, 2020:8).

In a nutshell, the lockdown and social distancing policy measures due to COVID-19 (TUAC Secretariat, 2020:1) has adversely impinged upon global education system. This was evidenced in a world – wide closure of schools’ academic activities, training as well as education facilities in institutions of higher learning. A report by TUAC Secretariat (2020:1) subscribed that by March 2020 more than 188 countries across the world, have officially announced an outright closure of school academic activities. This action consequentially halted more than 1.5 billion learners from active schooling. Similarly, the aftermaths of schools’ academic activities shut down after the declaration of lockdown as well as social distancing policy by the 36 states of the Federal Republic of Nigeria including Federal Capital Territory Abuja, revealed that more than 60 million students / pupils were compelled to stop schooling in the country.

This chapter intends to outline certain vital guidelines on how educators will plan and develop an alternative teaching which will be utilized to ensure continued pupils’ / students’ learning even when they are at their respective homes. This may not be unconnected to realization that no country on the globe could afford to shut education and its facilities for such a time longevity owing to the fact that schooling remains one of the powerful engines that drive nation to accomplish its national objectives.

Conception of Teaching

The term teaching as defined by Shuaib, (2020:6) is the process of promoting learning by which a teacher guides the learners in the acquisition of knowledge, skills, attitude or ideas. Fafunwa (1969) in Shuaib (2020:6) conceived teaching as a process of guiding the learner through formal activities and in formal environment. Also, teaching is conceived by Ali (2013:2) as the work of a professional teacher or an attempt to help people acquire some knowledge or experience, skills, attitudes in an organized manner or idea or an appreciation. To sum it up all, teaching is the systematic process of guiding learners to acquire, develop and accomplish a good measure of mastery of the knowledge, attitudes as well as skills that will help them live and work successfully in the community. It is important to recognize the fact that teaching being a profession, is carried out through some approaches that embodied a number of methods, strategies and techniques. Some of these approaches are labeled as ‘instructive approach’ and the ‘constructive approach’ to teaching and learning.

The instructive teaching approach simply refers to principles and methods of instructional planning and development in which teacher assumes a dominant role in the classroom activities. Knowing fully the instructional objectives and the subject – matter to be taught, the instructive approach mandates teachers to determine the learning experiences to be taught and methods / techniques to be used during the instruction. However, the approach offers learners minute or no opportunity to participate in teaching – learning process, and thus, reduce students to the status of passive listeners

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

to whatever the teacher does in the classroom. This approach is characterized as teacher – centred and subject – centred method of instructional planning and delivery from which students gain very insignificant experience and development (Ali, 2009:294).

Borich (2011:234 - 240) posited that “constructive teaching approach advocates for a learner – centred instructions within the realm of classroom purposely to offer the students a reasonable degree of participation in the teaching – learning processes”. The approach has mandated all educators to make students the primary reason for instructional planning and delivery within the framework of Nigerian schools. The teacher will accomplish this by means of allowing the students to participate actively in the classroom engagements via variety activities. To sum it all, whether constructive or instructive, the teaching and learning in COVID-19 period must integrate the utilization of Information and Communication Technology gadgets like television, radio, computer sets and smart – phones which would give teachers opportunities of exploring various media as well as social media platforms to inculcate the children with intellectual, attitudinal, moral virtues, values as well as skill acquisition and development including the relevance of the suggestions of National Centre for Disease Control on ways to tame the spread of COVID 19 global pandemic.

Outbreak of Corona Virus

After the World War I in 1914, great economic depression of 1928 and the World War II in 1928, outbreak of Corona virus in early days of February 2020, proved to be enlisted amongst the catastrophes that shook the entire world. And it undoubtedly exerted certain negative effects upon the economic, the social, scientific and the political structures of the globe. COVID-19 virus is a new virus linked to the same family of viruses as Severe Acute Respiratory Syndrome (SARS) and some types of common cold. COVID-19 is a disease caused by a new strain of corona virus. ‘CO’ stands for corona, ‘VI’ for virus, and ‘D’ for disease (UNICEF, WHO and IFRC, 2020:5). World Health Organization (2020:6) posits that individuals contracted with Corona virus display such symptoms as fever, cough and shortness of breath. UNICEF, WHO and IFRC (2020:5) added that in more severe cases, the infection can cause pneumonia or breathing difficulties. More rarely, the disease can be fatal.

Corona virus is a contagious ailment that is being transmitted through direct contact with respiratory droplets of an infected person (generated through coughing and sneezing). Individuals can also be infected from and touching surfaces contaminated with the virus and touching their face (e.g., eyes, nose, mouth). The COVID-19 virus may survive on surfaces for several hours, but simple disinfectants can kill it (UNESCO, 2020:6).

Furthermore, World Bank Group (2020:6) opined that there is no currently available vaccine for COVID-19. Although, many of the symptoms can be treated and getting early care from a healthcare provider in order to scale down its dangers. However, variegated clinical trials are in the pipeline purposely to assess potential therapeutics for COVID-19.

Lockdown and Social Distancing Policy Vis-a-viz its Repercussion on Schooling

At the moment corona pandemic was escalating drastically, governments across the world have by March 2020, enacted and executed the ‘lockdown and social distancing’ policies (Sintema, 2020:1). These policies appeared as a parcel of the concerted efforts at taming the further spread of the

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

ailment. However, it is worth noting that the aforementioned policy measure resulted in numerous effects on the economy, security, psychology and education. Indeed, shutting down school academic activities, is the most detrimental effect of the lockdown and social distancing policy measures.

It is undisputed fact that by March 2020, the 36 states of Federal Republic of Nigeria including the FCT Abuja have officially announced the outright closure of all schools' academic activities, extra-curricular activities as well as other educational facilities like the libraries and laboratories obtainable in institutions of lower, intermediate and higher learning. Despite the lockdown measure, the school e – learning facilities still remain open and invariably accessible to all pupils, students and trainees nationwide.

Guidelines for Designing Teaching and Learning in COVID19 Era

Teaching is a rational process (Okam, 2002:8) that requires skillful planning of its design in order to achieve the desired objectives. Mohammed (2020:14) added that teaching involves two main phases of its process, namely, the planning phase and second the delivery phase. At the planning stage of teaching process educators are critically involved in decision – making concerning the components of instructional design by means of pondering as follow:

- i. Designing of instructional objectives which the teaching process is purported to achieve. The COVID-19 pandemic should form part of the sources from which learning outcomes would be formulated,
- ii. Skillful selection as well as utilization of appropriate learning experiences to enable student achieve the formulated learning outcomes.
- iii. Effective organization of the selected learning experiences for teaching efficacy in the COVID-19 epoch,
- iv. Integration of the selected learning experiences with National Centre for Disease Control (NCDC) suggestions on relevance of lockdown, social distancing and other ways of achieving personal hygiene purposely to synergize teaching – learning with the Presidential Task Force (PTF) concerted efforts at fighting COVID-19 pandemic out of Nigeria,
- v. Appropriate selection and employment of instructional methods for the instruction in classrooms, laboratories, workshops and even when the learners remain at home to comply with lockdown and social distancing policies,
- vi. Exploring the assets implicit in Computer Assisted Instruction (CAI) for achieving teaching – learning efficacy during the lockdown and social distancing policies,
- vii. Selection and using instructional materials and resources purposely for e – learning and blended learning of concepts, principles, theories, theorems etc, during the lockdown and social distancing policies,
- viii. Effective utilization of computer sets and smart – phones by both teachers and learners for virtual teaching – learning programmes during the lockdown and social distancing policies,
- ix. Engaging the roles television and radio stations nationwide to assist the educators in transmitting instructional programmes to the school – age children during the lockdown and social distancing policies,

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

- x. The contributions of cyber cafés in the country have to enable the teaming learners to access their teachers with their questions, inquiries or need of an explanation during the lockdown and social distancing policies,
- xi. Selection and utilization of strategies and devices for evaluating the virtual teaching – learning programme. The evaluation may be holistic or not.

The above guidelines will sure - bet enable educators in various institutions of learning in designing as well as developing an effective, efficient and purposeful virtual teaching – learning processes that will not only equip and acquaint the generation of youths with cognitive structures, marvelous moral values and virtues including skills but also enable the later to improve on their personal hygiene in the 21st century Nigeria.

Designing Teaching – Learning in the Period of COVID-19

The task of designing teaching – learning programme is a professional enterprise that stem from variegated curriculum theories such as the classical theory pushed forward by Bobbit (1918), the rational curriculum theory advocated by Tyler (1949) and Taba (1962), the cyclical curriculum theory campaigned by Wheeler (1967) to mention a few which focus on the following subject – heads:

- i. Formulation of objectives,
- ii. Selection of contents,
- iii. Organization of learning experiences,
- iv. Integration of learning experiences,
- v. Evaluation.

Consequently, the emergence of some learning theories like Situated Learning Theory (Lave & Wenger, 1991), has embellished classroom engagements by giving it a theoretical perspectives underpinning the Lesson Study approach is which advances the premise that learning is situated in the specific activity and is embedded within a particular context and culture (Susan and Micki, 2009:50). Moreover, the Lesson Study approach as subscribed by Susan and Micki (2009:50) is a method of professional development that encourages teachers to reflect on their teaching practice through a cyclical process of collaborative lesson planning, lesson observation, and examination of student learning.

Indeed, teaching and learning during this period of school closure could be patterned or rather tailored towards e – learning which is coined as ‘virtual teaching – learning’. The teaching strategy that is anchored in computer assisted instruction. It is undoubted that the current circumstance calls for the exploration of virtual learning strategy as the only alternative to ensure continuation of children academic activities despite the finance shortfall in education sector. Virtual teaching – learning, educators will now teach the target learners via the use of modern gadgets of Information and Communication Technology (ICT) like computer sets, smart – phones, television and radio as well as integrating all social media platforms.

Designing the Instructional Objectives/Learning out Comes:

Learning outcomes according to Halilu (2020:9) imply the itemized behavioural changes that learners envisaged to accomplish at the end of a teaching – learning process. However, in this

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

period of COVID-19, teaching – learning transcends the subject – matter under review, it equally involves teaching children the skills of improving their personal hygiene. Since the teaching – learning process is designed and delivered to assist the young generations to acquire certain cognitive structures, development of good moral and ethical values and virtues as well as mastery some skills implicit in the subject area under consideration, it must equally aim at helping the later to accomplish improvement on their personal hygiene primarily to their survival. Thus, the sources from which teachers formulate learning outcomes should be diversified to include the NCDC suggestions on the relevance of lockdown, social distancing policy measures, frequent hand washing under runny water or hand sanitizers and other ways of improving personal hygiene, in addition to the cognitive structures, affective and the psychomotor edifices of the school subject under review. If educators formulate learning outcomes in line with aforementioned guidelines, teaching – learning process will complement government efforts at fighting COVID 19.

Selecting Apt Learning Experiences for Effective Teaching–Learning

The contents, variously called learning experiences refer to as the concepts, ideas and principles, laws, theories, theorems and formulae which are skillfully selected and utilized by teachers for classroom instructions in order to facilitate learners’ development in terms acquisition and mastery of cognitive structures, attitudinal attributes, good moral values and virtues as well as skills that will keep children abreast with yearnings of the local, national and the international environments. Added to that, teachers’ selection should take into cognizance select concept of lockdown, social distancing, and frequent hand washing under running water or hand sanitizers as well as other ways of enhancing children’s personal hygiene to help the country get rid of corona virus pandemic (UNESCO, 2020:4).

Organization of Learning experiences for Teaching-Learning Efficacy

Furthermore, the carefully selected learning experiences need to be skillfully organized in order to bring about teaching – learning efficacy in classrooms, laboratories and workshops. This task requires teachers to ponder on best approach to organize the contents / learning experiences to suit the nature of the discipline in question, intended learning outcomes and the target learners. It should be noted that content organization should be horizontal so as to allow the learners get a general knowledge that would prepare them for fighting the corona virus pandemic, besides the specific knowledge implicit in the subject area (UNESCO and IESALC, 2020: 30-32). Also organizing the teaching – learning process in school, educators are likely to pose the following questions: which part of the learning experiences should be taught first? Which aspect of it should come next? And which part of the content should be taught last? Which part of the teaching – learning encounter will be used to instruct children on dangers of COVID-19 and measures to be taken to tame the spread of the corona virus pandemic? Are the learning experiences going to be organized from simple to complex like in mathematics, from whole to part like in geography or chronologically like in history? Teachers’ organization of learning experiences should prioritize contents and topics that are associated with exams. It is important for educators could create a bulleting or summary of the main gist of the instruction into downloadable materials that would be uploaded for students / pupils to access.

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

Integrating the National Centre for Disease Control Guidelines in Schools for a Purposeful Teaching–Learning

The next on the guidelines for designing effective teaching – learning process is the integration of learning experiences for achieving a purposeful learning in Nigeria. Educators in Nigerian schools should skillfully integrate the general information about COVID-19, its culture and ways of taming the further spread of COVID-19 pandemic especially, ways of enhancing children personal hygiene, in the learning experiences selected to be taught in particular period of classroom engagement. Consequently, UNESCO & IESALC, (2020: 30-32) and UNESCO (2020:5-6) posits that fusion will focus on the following:

- a. The lockdown and avoidance of public crowds,
- b. Maintaining social distancing in public places like classrooms, workshops and laboratories,
- c. Frequent hand washing under running water or hand sanitizers,
- d. Avoid using dirty hands to touch your mouth, eyes and nose,
- e. Imbibing the culture of using handkerchief or toilet paper to cover your mouth and nose when coughing,
- f. Imbibe the habit of masking up,
- g. Avoid touching handles of classroom and school bus doors as well as laboratory apparatus without handkerchief or toilet paper,
- h. Coughing your cough into your elbow,
- i. If you are unwell even with a slide fever stay at home,
- j. Avoid crowded spaces so on,
- k. Call on the NCDC with 08009700010 when someone is suspected to have COVID -19.

If educators would integrate the learning experiences in tune of afore said guidelines, teaching – learning will not only assist the learners accomplish academic growth and development but also achieve an enhanced healthy living in the 21 century Nigerian polities.

Selecting Appropriate Methods that Emphasizes Virtual Teaching - Learning

While schools are closed, many countries have turned to distance learning as a means of mitigating for lost time in continuing education services (UNICEF, WHO and IFRC, 2020:7). It therefore, became necessary for the Federal Ministry of Education and state Ministries of Education in Nigeria to fashion out some suitable methods and strategies which educators would explore for engaging the distinctive categories of pupils, students and trainees' gainful academic activities.

NERDC (2019:3) defined method of teaching as the principles and approaches used to conduct instructions within the realm of classroom, laboratories and workshops. As a matter of fact, the primary pre – occupation is the continuation of students' learning at this era of COVID 19, educators should therefore, explore the assets in Computer Assisted Instruction (CAI). The CAI offers educators a vast opportunity of integrating modern ICT gadget such as the radio, television, computer sets and smart – phones that formed the rubrics for using the virtual teaching and learning pedagogy at the time schools were closed in compliance with lockdown and social distancing policy measures.

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

The utilization of virtual teaching – learning pedagogy hinges upon tripartite media of sending and retrieving information, viz; first, the Ministry of Education’s web site that will form the education data base for all stakeholders, especially, teachers and students; secondly, the teachers’ personal profile that will include his official staff e – mail, with which he / she uploads lesson plans and notes on e – learning handle in the Ministry of Education web site; and students’ profiles that will also include his / she personal student e – mail via which they view, read and download information including study materials concerning the subjects he / she offered.

Although it has some drawbacks, the virtual teaching – learning pedagogy provide most appropriate activity – based, learner – centred and resource – based distance learning strategy via teachers engage learners in independent studies activities whereby students download, study and use the various messengers available upon social media like whatsapp, face book, e – mail, g – mail and instagram to ask teachers questions, make inquiries and solicit for more explanations on certain concepts, theorems, laws, theories, definition etc. Furthermore, using virtual teaching pedagogy is not an easy task, this is because educators need to be trained on virtual teaching methods, namely; the e – learning method, the blended learning, the teleconference / videoconference methods, to enable them acquire and master the skills of exploring the high-technology and low-technology for preparing the main gist of the lessons into bullets of downloadable reading list and upload the same on Ministries of Education’s web site for students’ and trainees’ consumptions.

Selecting and Utilizing Instructional Materials and Resources for Remote / Virtual Teaching – Learning Effectiveness:

Decisions on designing and implementing teaching – learning programme will become inconclusive without the choosing and using appropriate instructional media variously known as instructional materials and resources. However, further decision on the apt approaches of selection as well as limiting the number of applications and platforms is very necessary, this is because not all tools are adaptable to all states’ contexts. The instructional media include the audio materials like radio tape; the visual materials like pictures, maps, charts, graphs, projector, CD Rom and slides; the audio – visual materials like computer system, television, video tape, video CD flats, films and film strips; the print materials like newspapers, magazines, journals, books, periodical and reports; historical sites, museums and monuments; resource persons like Doctors, Pharmacists, Bankers, Engineers and Drivers among others, that teachers use during classroom instruction to enable learners achieve increased conceptualization, and understanding of concepts, than in oratory of abstract ideas.

NERDC (2010:19) subscribed that educators should explore the use of the following gadget for the purpose of virtual classroom encounter especially during school closure:

1. The satellite communication (local and national television and radio stations);
2. The Computers and smart phones,
3. Social media platforms,

The above is considered in some details below:

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA**Using Television and Radio Stations for Remote Teaching–Learning:**

The primary mandate of state and national television and radio broadcast stations hinges on enlightening, entertaining and educating the general public via their programmes. Therefore, the commitment of such stations to daily coverage, recording and transmission of valuable and educative information exposed their usefulness particularly to younger pupils, students and their (caregivers). During this period of lockdown and social distancing, state Ministries of Education capitalize on various public and private radio and television stations domiciled in the state to transmit teachers' instructions in variegated Arts, Commercial, Science and technical school subjects for the children to continue learning at the time of school shutdown (UNESCO & IESALC, 2020: 33; UNESCO, 2020:4-5).

Utilizing Computers and Smart Phones for the Efficacy of Virtual Teaching–Learning:

The computer sets and smart phones are yet another important Information and Communication Technology apparatus that facilitate virtual interaction between two or more groups of people. Thus, computer system and smart – phones could easily be used for conducting virtual teaching purposely to satiate the quest to continue with children's learning of various school subjects in Nigeria, particularly during the lockdown and social distancing policy measures. These ICT gadgets would assist teachers to explore various options of e – learning tools including: online virtual lessons, downloadable lessons, mobile – phone and social media blasts, accessible material for teaching pupils, students and trainees using screen readers (UNESCO, 2020:4). To sum it all, the use of computer system and smart – phones as ICT gadgets will not be overemphasized in affording teachers a vast and ample opportunity to instruct the learners on definition, explanation, nature and typologies of some concepts, principles, laws, theories and theorems; receive learners' feedbacks in form of questions, reactions and inquiries made in various school subjects.

Using Social Media Platforms for Virtual Teaching - Learning

As raised earlier on that utilizing virtual teaching – learning pedagogy hinges upon tripartite media of sending and retrieving information, viz; the Ministry of Education's web site that will form the education data base, the teachers' personal profile that will include his official staff e – mail; and students' profiles that will also include his / her personal student e – mail. In this emergency situation, Ministries of Education can allow educators, pupils and students in Basic Education and secondary schools use their private profiles on various social media networks like the tweeter, the face book, whatsapp, the instagram and yahoo mail, Gmail and many messengers to continue with virtual teaching – learning session in variety of school subject like economics, physics, history, mathematics among others.

Evaluating Teaching – Learning Process in COVID-19 Epoch:

Audu (2011:67) shared Wheeler (1967) view that evaluation of teaching learning process purposely to make decision on whether learners accomplish the formulated objectives or not. The concept of evaluation is a technical component of an instruction which centres on analytic diagnosis of each stage to investigate into students' achievement of the envisaged learning outcomes. National Teachers Institute (2007:1) conceives evaluation as a systematic process of collecting, analyzing and interpreting information to determine the extent to which pupils are achieving

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

instructional objectives. Evaluation of the virtual teaching and learning programmes must also be virtual in nature. Teachers should plan and implement questions and answer sessions using any of the social media platforms that cover all learners in a particular group of schooling in order to evaluate the process, the inputs and the products of the virtual teaching and learning programme. Radio and television stations should be used to transmit the same questions and answers as well as entertain reactions and inquiries from the low – level learners at home.

Conclusion

The primary goal of designing teaching–learning is to ensure alignment synergy amongst instructional design and national standards. Every country has peculiar objectives which serve as guiding post to sharp its envisaged economic, social and political growth and development. The national objectives therefore, reckon solely on the assets implicit in teachers’ instructional design and delivery within the framework education system to become conclusive realities. Thus, educators are charged with ethical and moral obligations of imbibing use of modern gadgets of Information and Communication Technology (ICT), viz; radio, television, computer sets as well as smart–phones that confer them a vast and golden opportunity of exploring the tenets implicit in variegated media and social media platforms for planning and delivering all instructional engagements. And this purposely to ascertain learning and training continuity at all levels of Nigerian education system, with the aged – long hope of inculcating generation of youths with where – with – alls of accomplishing intellectual, good moral virtues and values, spiritual and skills growth and development that will enhance their capabilities to fight COVID-19 global pandemic even at this material time of school closure.

Suggestions

Based on the forgoing, the following recommendations are inferred:

1. Virtual teaching pedagogy requires educators to acquire some professional skills to utilizing both high–technology and low–technology for the efficient, effective and purposeful planning and delivery of e–teaching–learning programme.
2. Subject specialists should check and cross check teachers’ instructional plans and notes prior to its upload on the Ministry of Education’s web site/teachers’ profiles or live transmission by radio and television stations.
3. School Base Management Committees (SBMCs) and the Parents Teachers Associations (PTAs) should sensitize parents on the need to coordinate the children when listening to / viewing radio and television teaching programmes.
4. State Ministries of Education should form a team of subject specialists that will appear in a question and answer sessions on radio and television stations.
5. Federal Ministry of Education should partner with National Communication Commission (NCC) to request the telecommunication companies in Nigeria allow the teachers and students upload on and download lesson plan and notes from MoE data base free of charge.
6. Federal and the state governments should partner with international donor organizations like Save the Children, UNICEF and their likes in financing the transmission of radio and television teaching programmes.

COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

7. Private radio and television broadcast stations should patriotically discount at least 30% of the total cost of transmitting the radio and television teaching programmes to the financiers in their respective states across the federation.

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COVID-19: THE CHANGING LANDSCAPE OF HIGHER EDUCATION IN NIGERIA

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