

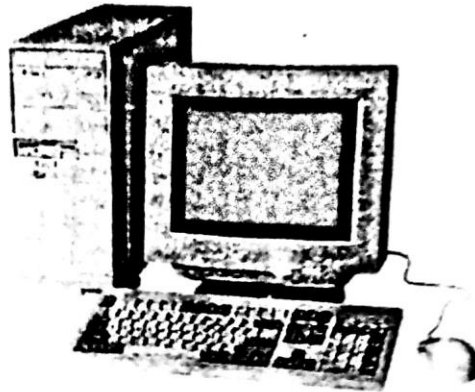
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Bridging Educational Gap between Lecturers and Students during Corona Virus Period with Online Functional Sustainable Innovative Technological Instruction in South-South Geo-Political Zone – Nigeria

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Abstract

Bridging the education gap between lecturers and students in the coronavirus period using e-online functional instruction in south-south geopolitical zone - Nigeria is the target of this paper to avert disruption of curriculum in public health education, healthcare system, school health programmes, biology, chemistry, educational technology, business education, civic education and other subjects/ courses around the world. Availability, the usability of ICT facilities, internet connectivity and acquisition of internet-powered computers, smartphones, individualized study centres and education institutions' functional sustainable e-online educational technological instruction were examined during COVID-19 pandemic school closures. E-online-ICT facilitated instruction is inthing now as stakeholders especially innovative educators can impact knowledge, skills, attitudes and values via e-online class modality to observe COVID 19 pandemic protocol of physical distancing among others without suspending the educational process to achieve set goals. It also looks at functional educational sustainable e-technological instruction, e-curriculum delivery, e-syllabus, e-lesson plan and adaptation of alternative method during the second wave of COVID-19 pandemic in Nigeria. The paper draws a conclusion that sustainability of functional education largely depends on re-orienting curricular to address societal needs from the pre-basic to higher education levels in terms of production and consumption rates within south-south geopolitical zone of Nigeria.

Keywords: Bringing, Educational gap, Lecturers, Students, Coronavirus.

This paper is focused on the examination of past empirical studies related to the instructional gap between instructors and students during coronavirus pandemic school closures plus subsequent emergency of adoption of e- online innovative technological

teaching to overcome learning losses particularly in South-South geopolitical zone of Nigeria. The coronavirus pandemic gave rise to teaching and learning losses in Africa, Asia, America, Europe, Canada, South Africa, India, China and around the world. Eysenbach (2019) notes that the neutral noun "virus" which means "poison" in Latin that can kill the virus. Similarly, the Greek term like Latin refers to it as Pharmacies (apuakov) which equally connotes poison (WHO 2019). Accordingly, the relationship between these two terms is the fact that pharmacies are looking for "poisons" that will kill the "poisons" which undermine human health.

Hence, the name "coronavirus" is given to it because through the microscope, the virus is shaped like a "crown" that makes it "king" of poisons (WHO, 2019 & CDC, 2021). To be candid, when news of coronavirus began to spread from the Chinese city of Wuhan in late 2019, no one anticipated the scope of coverage all over the world within a very short period. Coronavirus 2019 is popularly called "COVID- 19" or "Severe Acute Respiratory Syndrome Coronavirus" (SARS- COV-2) has disrupted curriculum delivery worldwide whereby people were forced to stay at home in confinement (Kreuzer, Cado & Raies, 2019). A lot of research sought to analyze the impact to find a lasting solutions to the pandemic to no avail. The results of the containment measures of COVID- 19 are somehow detrimental to the mental health of individuals globally according to the Center for Disease Control (2021). The most vulnerable are children who could not understand what is happening and were frustrated out of school. The pandemic has caused stress, psychological discomfort, sleep disorder and instability among lecturers and the student population in Italy, India, France, South Africa, Kenya, Central Africa, Cameroon, Niger Republic and Nigeria (Coloman, 2021 & Felicia, 2021). It compelled educational institutions across nations of the world to engage and support students' working online together from school to home with its consequent anxiety because of teaching and learning losses experienced by instructors and learners.

An Empirical Framework of related literature Review

Bridging the educational gap created by the coronavirus pandemic which continues to threaten life and cause unprecedented disruption to the execution of functional sustainable curricula in public health education, healthcare systems, school health programmes, physical education, educational technology, biology, physics, chemistry, agricultural science, computer science, business education, business administration, English studies, economics, history, civic education and many others around the world through electronic-online functional sustainable instruction to avert deadly contagious COVID-19 pandemic disease. Really, the impediment introduced to the achievement of the functional sustainable educational goals for national development by coronavirus pandemic school closures during global lockdown cannot be pushed aside easily due to its negative unbearable consequences on teaching-learning encounters (Gore 2020, Nwaka, 2020). Coronavirus pandemic is obviously presenting itself as a global public health challenge to medical practitioners, health educators, instructors and school administrators who by job prescriptions must be forced to execute official curricular safely while observing the COVID-19 pandemic five key prevention strategies essential to safe delivery of in-person instruction and help to prevent COVID-19 transmissions in schools as follows:

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- (1) Universal and correct use of facemasks
- (2) Physical distancing
- (3) Hand washing and respiratory etiquette
- (4) Cleaning and maintaining healthy facilities
- (6) Contact tracing in combination with isolation and quarantine. Schools providing in-person instruction should prioritize two prevention strategies:
 - (i) Universal and correct use of facemasks should be required
 - (ii) Physical distancing should be maximized to the greatest extent possible. All these prevention strategies provide some levels of protection and layered strategies implemented at the same time could provide the highest level of protection. Schools have been advised to adopt prevention strategies sequel to the largest extent practically layered approach as a matter of necessity to be observed every time while the World Health Organization is still searching for the permanent cure of coronavirus (CDC, 2021a).

Hence, the paper focuses on bridging the borderless educational world of COVID-19 pandemic using e-online functional serviceable pedagogic technological instruction to close the gap between lecturers and students to overcome such ugly circumstances experienced by south-south geopolitical zone students, health educators, medical students, healthcare givers in tertiary institutions and other stakeholders during national compulsory school closures in Nigeria. An electronic- online functional sustainable technological instruction is an attempt to bridge the gap created due to the emergence of coronavirus pandemic and the urgent need to transit to remote online teaching-learning situations so that the educational process may not be suspended again.

Availability and Usability of ICT E- Online Facilities

Assessment of availability and usability of ICT facilities with very good internet connectivity, acquisition of internet-powered computers, smart phones individualized study centers plus various educational institutions' sources can be used to determine the functionality of technological instruction. Unfortunately, school closures had suspended the educational process due to COVID- 19 pandemic lockdown in Nigeria and elsewhere. For instance, lectures and other educational activities were paused resulting from coronavirus outbreak. Students of public health education and related disciplines could not go for their usual clinical/ laboratory skill training to avoid exposure to the COVID-19 pandemic during clinical training (Plosone, 2021 and Stella, 2021). Available literature show evidence of students' reactions towards e-learning method due to sudden disruption of schooling and alternative swift- shifting to a new instructional model which extended the duration of their study potential resulting from school closures in Libya as well as Nigeria. Expressions from higher institutions, and stakeholders revealed that they were also unprepared to tackle associated challenges of teaching and learning in COVID- 19 pandemic period. The government could not have performed magic due to the lack of ICT facilities in tertiary institutions across the board in the south-south geopolitical zone in Nigeria. Indeed, it was between life and death as restriction hits every civil servant including lecturers who remained at their various homes to minimize the rapid community widespread of COVID-19 pandemic.

E Online- ICT Facilitated Technological Instruction.

Currently, the best method of teaching is the remote e- online ICT class arrangements. It is a sure way to go because COVID-19 pandemic protocols can easily be observed by critical stakeholders, particularly in the safe execution of e- technological functional sustainable instruction. E-online technological instruction requires integration of information communication technology (ICT) to facilitate functional serviceable and effective instruction within educational institutions. The time to revise the school curriculum to match new happening is now to reposition the orientation of the mindset of innovative educators to use technological instruction and evaluative qualities through collaborations in educational institutions' objectives and the health sector because COVID-19 has no cure yet. No education system can rise above the quality of its teacher and so, the quality of our classroom teachers now has a direct bearing on the learners via proper utilization of functional sustainable technological digital instruction (FRN, 2012; Barnamala, 2015 & Ekanem, 2015). Phan (2020) reported the impact of taking online class during the COVID-19 pandemic in Mexico on the academic performance of University students to be uncomfortable due to new environmental conditions and adaptation of new technologies. The implication of this report in the study is that a healthy, comfortable and safe classroom environment where technological online instruction is utilized helps to enhance performance. Consequently, students could be at risk of being exposed to the COVID-19 pandemic due to uncomfortable environmental conditions in a conventional classrooms.

Education has been described as an instrument of change for any nation. Information, communication and technology are one of the several tools for education components revolving around curriculum execution plus pedagogy in a single entity known as ICT facilitated teaching. Curriculum execution here acts as a prim over to reach the overall aim of education. Education seems to possess growing qualities such as a living organism which one of its several attributes is constant emphasis on adapting itself to new demands and circumstances. Adoption of e-online class modality using Zoom join meeting, WhatsApp, Facebook and YouTube requires adaptation of new digital equipment vis-a-vis new atmospheric internet conditions to transit into functional sustainable educational instruction capable of impacting students' academic achievements. Furthermore, developing and embedding software packages with the capacity to execute electronic curriculum (e-curriculum), e-syllabus, e-scheme of work, e-lesson plan and/or e-lesson note requires adequate knowledge of health educators to successfully transit from the old method of e-teaching to e-technological instruction platform application (CDC, 2021b). With ICT incorporated into such media of e-curriculum pedagogic execution, data collection, data processing, data transmission, and networking, an improved technological functional and serviceable instruction can be displayed. Information and communication technology is a combination of several concepts including internet. It is gratifying to note that the development of computer technological functional instruction and application of telecommunication networking led to internet and intranet ICT curriculum delivery.

Functional Education

Among Nigeria's educational objectives include "inculcation of the right type of knowledge, values, skills and attitudes for the survival of individual and the Nigeria society

plus acquisition of appropriate skills for the development of mental, physical and social abilities/competencies for the individual to live in and contribute to the development of the society" according to the national policy on education (FRN, 2012). Functional education leads to the development of individual potentials which can be cognitive, affective and psychomotor domains to their fullest capacities in order to contribute meaningfully his/her quota to the development of the society thereby transforming the environment to an enviable status. Functional education makes an individual productive and self-reliant. At present, Nigeria lives in a dynamic world resulting from research findings, new information, skills, knowledge, and innovative instructional methods which are recently been discovered. Teachers need to keep abreast with new updated innovations to produce individuals fully equipped to face future challenges as the development unfolds itself either positive or negative in the case of the COVID-19 pandemic (Gore, 2020).

Functional education is achievable via relevant current or anticipated needs, aspirations, challenges or events emanating from natural and artificial occurrences and changes in our environment demanding urgent solutions so that the society can be peaceful. The functionality of education can be seen as a journey of life and its attendant, prospect or problem to face future realities which can be social, economic, health, career, management, ministry, mental, material, cultural, political and religious. It assumes the dimensions of wholesome training of an individual to become useful in the society and nation at large. Functional education is a factual active education which stimulates and empowers an individual with saleable skills, values and benefits all concerned within and outside the formal classroom. Functional education necessarily translates itself into establishing an enhanced teaching environment, health education, infrastructure, road, employment opportunities, politics without bitterness, patriotism, food sufficiency and good governance without corrupt practices (Fuandai, Shiaki & Gbari, 2007).

However, a dysfunctional educational institution is inferior even to the traditional curriculum. In brief, an infective curriculum is equally unacceptable specifically in the south-south geopolitical zone's tertiary institutions using dysfunctional curricula that lack curriculum experts who should undertake regular inspection of their curricula for one or more of these signs of dysfunctions to review. Some of these signs of dysfunctional curricula are:

- a. Presence of curriculum which undermines educational philosophy and objectives of a nation/ society,
- b. The component is carried out without maintenance/ innovation,
- c. Curriculum reviews occur without reference to other educational components,
- d. Faculty development programs do not use core curriculum strategy to perpetuate the situation via staff development programmes. How can a dysfunctional educational, programme be sustainable in COVID -19 pandemic period?

Sustainable Technological Instruction

Dysfunctional educational programmes cannot be sustainable without effective and successful proper utilization of technological instructional methods and strategies. Proper curriculum implementation is inevitable because the success of a well-planned lesson note largely depends on its classroom execution so that instructional objectives

proposed by the implementer in advance can be achieved by the end of the lesson. The concept of curriculum denotes knowledge, skills, attitudes and values to be imparted by the teacher to the learner(s) in an educational institution formally. The process of such curriculum delivery involves the selection of the topic to be taught, a method to be used, aims/objectives, instructional materials/ technologies to be utilized as well as class/mental ability level of learner(s) (Babalola, 2004; Onyeachu, 2010)

Realization of instructional objectives indicates clearly learner's proficiency level and the teacher's ability in terms of knowledge of the subject and subject matters he/she has taught (Okoro, 2010). Sustainability paradigm in executing functional curriculum in the south-south geopolitical zone in Nigeria during the second wave of COVID-19 pandemic is very critical if an alternative method of adapting electronic- online plus ICT internet connectivity as an educational tool is not employed. Sustainable functional education seeks to serve a purpose in a given nation, otherwise, such a nation would not invest in it (Awuja & Ojochegebe, 2021). For any educational institution to be functional and sustainable too, it requires a high degree of flexibility and adaptability. New approaches need to give students the freedom to appreciate their capabilities and individual talents/potentials. It requires exploration of alternative modes to generate, develop and translate the new ideas into a value called innovation by the power of imagination. (Ademu, 2008; Udoh & Akpan, 2014).

Education and training are key factors to drive a nation like Nigeria toward sustainable development. Sustainable functional education curricula delivery intend to meet desired needs of the present without compromising the future generational ability to meet their own needs too. Sustainability in this context has three components which include environment, society and economy. The well-being of these three is interwoven because, healthy prosperous society, for instance, relies solely on a healthy environment to give food plus resource, safe drinking water and free air from pollution to its populace. A brief consideration of dialogue on sustainability reveals that an increase in population and resource consumption can jeopardize a sustainable future because education is linked to fertility rate and resource utilization.

Hence, when the fertility rate is reduced, it becomes a threat to overpopulation in a country thereby enhancing progress/development towards sustainability. The opposite is factual from the relationship hanging between functional serviceable education and available resource consumption for technological instruction in COVID- 19 pandemic period. And so, if the assumption that more highly educated individuals have higher incomes and utilize more resources than poorly educated ones who have lower-incomes, it follows that more applications of sophisticated technological instructions may increase the threat of sustainability to functional education (Daily & Eugene, 2013). To meet this challenge depends on reorienting curricula to address the need for sustainable production and consumption patterns by re-examining curricula from pre-basic to higher education levels in south- south geopolitical zone in Nigeria (Basilaia & Kvavadze, 2020 and Ozil & Arun, 2020).

Conclusion

Bridging the educational functional sustainable gap existing between lecturers and students while COVID-19 lasts via e-online technological instructions in South-South geopolitical zone of Nigeria is very essential to avert disruption of schooling is the focus

of this paper. Also, incorporating e- online ICT plus by innovative educators in the study could be seen as a welcome development in as much as lecturers and students have access to electronic- online technological instructional devices and can utilize them during lectures too. This paper establishes that e- online ICT enhanced instruction is in thing now because, stakeholders particularly innovative teachers are charged to impart knowledge, skills, attitudes plus values to students irrespective of class location anywhere around the world if there is a network. With e- online class modality in place, physical distancing to prevent infectious coronavirus pandemic can easily be adhered to and one is sure of the continuous educational process. It is hereby concluded that sustenance of functional e- online technological instruction is attainable through reorienting curricula of South-South geopolitical zone of Nigeria to address societal lecture challenges during the second wave of COVID-19 pandemic to avert disruption of schooling from pre-basic to higher education levels in the future functional sustainable educational process.

Recommendations

From the foregoing discussion and conclusion, it is hereby recommended that:

1. Utility of electronic- online which incorporates ICT- technological instruction should be made compulsory in South-South geopolitical zone of Nigeria to fully implement physical distancing, hand washing and respiratory etiquette to avert coronavirus pandemic widespread.
2. Higher Education within the zone should expose lecturers and students compulsorily to competency levels in the application of e-online instructional methods.
3. Curricular executors and e- technological instructional designers are encouraged to incorporate e- syllabus, e-scheme of work, e-lesson plan, e-lesson note and e-evaluation methods to salvage functional sustainable educational process without hindrance respectively.

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