

## **COVID-19 AND SECONDARY EDUCATION IN BENUE STATE: IMPLICATIONS FOR EDUCATIONAL MANAGEMENT IN MITIGATING THE IMPACT OF THE PANDEMIC**

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### **ABSTRACT**

*This study investigated 'COVID-19 and secondary education in Benue state: Implications for educational management in mitigating the impact of the pandemic'. Two research questions were raised and two hypotheses were formulated for the study. The design adopted for this study was descriptive survey design. The population of the study is 4,176 secondary school teachers in Benue state. The sample for this study is 417 respondents. Simple random sampling technique was adopted to draw the sample size of the respondents. A structured questionnaire developed by the researchers titled 'COVID-19 and Secondary Education Questionnaire, (COSSEQ) was used for data collection. Mean Score and Standard Deviation were used to answer the research questions while Chi-Square was used to test the hypotheses. This study found that the secondary schools in Benue state were inadequately prepared to adopt alternative methods of education during the pandemic. The study recommends that management of secondary schools in the state should ensure that adequate technological infrastructure is provided in secondary schools and teachers should be adequately re-trained to facilitate the adoption of alternative methods of teaching and learning in the face of pandemics.*

**Keywords:** COVID-19, Secondary Education, Implications, Educational Management, Benue State.

## **Introduction**

We are living in troubled times occasioned by a global health challenge which emanated from the emergence of a novel strand of Corona Virus. According to United Nations (2020), the entire world faces a global health crisis unlike any in the 75-year history of the United Nations – one that is spreading human suffering, crippling the global economy and upending people's lives and aspirations. UNESCO (2019) lamented that Corona Virus (COVID-19) is threatening the whole of humanity. COVID-19 is having an unprecedented impact on all countries, both in terms of prompting the scaling of public health preparedness and response and protection of vulnerable populations, and in terms of requiring mitigation of broader social and economic impacts (Pravat, 2020). On March 11, 2020 World Health Organization (WHO) declared COVID-19 as a pandemic. Since then it has affected about 79, 315, 196 people worldwide as at 26<sup>th</sup> December, 2020, (WHO, 2020).

In an attempt to contain the spread of COVID- 19, in the large majority of countries around the world educational institutions have decided to temporarily suspend in-person instruction and moved to an alternative method (remote learning or online model) of delivery. According to Dong, Hongru and Lauren (2020), a decision was made by UNESCO based on the indications of previous investigations for pandemic situations, and it was concluded that the closure of educational centers together with the implementation of measures such as the isolation of the sick or suspected ill in hospitals or residences, the ban on public gatherings, and the closure of roads and rail lines were effective measures to slow the advance of a pandemic. According to United Nations (2020), at the end of April 2020, educational institutions were shut down in 186 countries, affecting approximately 74% of total enrolled learners on the planet. In many countries, schools have been closed since the beginning of March 2020, while in others (e.g. most of China and South Korea) in-person classes had been already cancelled since January 2020.

School closures due to COVID-19 have left over a billion students out of school. Espino-Díaz, Fernandez-Caminero, and Hernandez-Lloret, (2020) note that various governments are pursuing a variety of approaches to mitigate school closures. At the same time, all countries are undergoing the largest economic contractions of our lifetime, reducing public budgets and household incomes. School closures may lead to a jump in the number of dropouts and an erosion of learning. Bandiera, Niklas, Goldstein, Imran, and Smurra, (2019), laments that increased dropout rates are one important channel linking emergency school closures and other educational disruptions to losses in average lifetime educational attainment. In general, as children age, the opportunity cost of staying in school increases. Closure of schools may make it harder for households to justify sending older children back to school after a forced interruption, especially if households are under financial stress.

While schools are closed, students are not just losing a proportion of their previous learning, but are also potentially missing learning that they would have normally undertaken. A recently published brief by Zhang, Wang, Yang, and Wang, (2020) used research on the summer learning loss and student learning gains across typical school years with a nationally representative sample of students in grades 3-8 (equivalent to Years 4-9) to estimate learning losses as a result of COVID-19-related school closures. Their projections of a COVID-19 slide scenario, where students missed the learning gains they would normally have during school

closures and also showed patterns that are typical of learning loss during summer holidays, suggest that students might return to schools in with about 70 per cent of the learning loss in a typical school year and even smaller learning gains (less than 50 per cent) where measures are not taken to mitigate the impact of the pandemic.

One could say that the pandemic adds a further degree of complexity to education globally but particularly in Africa because of the unresolved challenges it faced such as growth without quality, inequities in access and achievement, and the progressive loss of public financing leading to low level of technological infrastructure in schools. Dong, Hongru and Lauren (2020) lament that the most immediate impact of COVID-19 has obviously been that the temporary cessation of classroom activity at educational institutions has left students, particularly graduands and those on the verge of finishing school and aspiring to begin tertiary education, in a completely new situation and without a clear idea of how long the impact will last, the immediate effect it will have on their daily life, costs and other financial burdens and, naturally, on the continuation of their studies. Raluca, Pellini, Katy, and Toby (2020), lament that the situation is particularly worrying for rural secondary education students who are more vulnerable on account of the more fragile condition of such schools. According to Zhang, Wang, Yang, and Wang, (2020), a disruption of their space of learning brought on by a crisis such as COVID-19 can exacerbate their fragile condition and force them to drop out, thereby perpetuating a dicey situation of exclusion as a result of the inequity which is characteristic of the public secondary education system in Africa. Ubangu, (2020) found out that public secondary education in Africa is devoid of technology which can be utilized for non-classroom interactions in times of pandemics or other global demographic holocausts.

One emerging demand from the present crisis is the need to embed more technology into the classroom. Lisa, Kimmel, Etai, and Holdheide (2020) are of the view that technological solutions like adaptive learning technology can ensure personalized learning with minimal teacher involvement, and have the potential to deliver better learning experiences at low-costs as well as reduce the spread of the scourge. Yet, the pace of adoption of these technologies has been slow and uneven in Nigerian public and rural secondary schools as Bandiera, Niklas, Goldstein, Imran and Smurra (2019) and Orkula (2020) reported. Orkula (2020) found out that many rural schools in Nigeria had low level of technological infrastructure for information and communication technology as a medium for curriculum instruction. This is compounded by the absence of electricity power supply in such schools coupled with a dire absence of or poor internet connectivity in such schools. This calls for intervention by educational management.

Management of educational institutions is a concept that entails the quest for putting the formal educational system under control, regulation or supervision in order to judiciously manage scarce human and material resources towards accomplishment of the educational goals and objectives. Some aspects of educational management, according to Orkula (2020) include adequate funding, proper staff recruitment or appointment, planning, budgeting, organization, directing, supervision, sustained provisions for staff welfare, provision of needed equipment, facilities or materials, staff development, projecting and planning for students' enrolment, proper staff retention and making arrangements for effective teaching

and learning even in the face of pandemics. These roles of educational management seem to have been overwhelmed by the impact of COVID-19 pandemic.

COVID-19 has highlighted a critical gap in school-based (learning) contingency planning and emergency preparedness) within the education sector in Nigeria. Education in Emergency Working Group (EiEWG) (2020) argue that learning-based contingency planning is essential to ensure learning continuity during times of crises, to protect students and educators, and to build resilience within the education sector. While the government released a COVID-19 contingency plan, the information contained within the document focused on keeping schools safe during the pandemic, and counseling and providing information to the students above preventative measures and actions to take to curb the spread. Ubangu (2020) however notes that, while this is beneficial information, a school-based contingency plan that doesn't ensure continuity of learning despite the challenge is, albeit, incomplete.

Ubangu (2020) laments that, students from public secondary schools who happen to come from low socio-economic backgrounds tend to have fewer opportunities to access technological infrastructure, fewer chances of completing education, and lower educational outcomes. e-Learning Africa (2020) observe that, digital technologies may, in theory, help to reduce this gap by enabling access to additional learning resources and facilitating pedagogical strategies that could be beneficial to the students. This is especially true if schools compensate for the limited access to and use of digital technologies that disadvantaged students typically have at home. According to World Bank (2020), digital technologies can support the move from a teacher-centered model to a student-centered instructional approach. This may be of special benefit to students at risk of dropping out. Moreover, the use of technology can help to adjust levels of difficulty and learning speed to the capabilities of disadvantaged students, (Hodges, Moore, Lockee, Torrey and Bond, 2020). The Nigerian secondary education seems to be alienated from this scenario, hence, the present research.

### **Statement of the Problem**

Education is not only a fundamental human right but an enabling right with direct impact on the realization of all other human rights. It is a global common good and a primary driver of progress across all facets of human endeavours as bedrock of just, equal, inclusive and peaceful societies. When education systems collapse, the peace, prosperity and productive capacities expected of societies cannot be sustained. Unfortunately, the global education system has been subjected to an extraordinary twin shock partly occasioned by the novel Corona Virus re-christened COVID-19 pandemic and global economic hiccups. Schools have been closed globally in a bid to fight the pandemic and there is a widespread global economic recession. Unemployment numbers are on the rise, family incomes are falling, and government fiscal space is shrinking. This twin shock, which the researchers presume are mostly felt in the underdeveloped and developing economies, has called for a paradigm shift in order to provide inclusive education as a right of every educable individual.

As a response to this debilitating influence of the twin shock, data from the World Bank and UNESCO showed that most developed countries have made progress to ensure inclusive and equitable quality education through the implementation of alternative methods of teaching

and learning chiefly among them being online education. This was followed by the global closure of educational institutions. In the face of these advancements in the education system by developed countries to provide education to their citizenry in the face of global economic hiccups and pandemic, it seems the education system in Benue State is far from keying into these phenomenal changes. Personal observations by the researchers reveal that most rural and public secondary schools in Benue state have little or no technological infrastructure on ground that can facilitate migration from conventional teaching and learning to other alternative and inclusive methods of education.

A visit to most rural and public secondary schools in Benue state reveals that most teachers have not being primed for a move to alternative methods of education which guarantee effective and inclusive education for all educable citizens. It seems COVID 19 has exposed secondary education system in Benue state to odium and ridicule as observations showed that during the closure caused by the pandemic, no effort was made to mitigate learning loss. This could be an obstacle to the effective management of educational institutions. The researchers therefore speculate that secondary schools in Benue State were not adequately prepared to mitigate the influence of the pandemic by resorting to alternative methods of education. The problem of this research is stated thus: What is the extent of preparedness of secondary schools' management in Benue state in mitigating the impact of COVID -19?

**Purpose of the study**—The purpose of the study is to examine:

1. The extent of the level of technological infrastructure of secondary schools for alternative (online) methods of education.
2. The extent of preparedness of public and private secondary schools for alternative (online) methods of education.

**Research questions**—The following research questions were raised for the study:

1. What is the level of technological infrastructure in urban and rural secondary schools for alternative methods of education?
2. What is the extent of preparedness of public and private secondary schools to move to alternative (online) methods of education?

**Research hypotheses**—The following research hypotheses were formulated for the study:

1. There is no significant difference in the the level of technological infrastructure in urban and rural secondary schools for alternative (online) methods of education.
2. There is no significant difference in the extent of preparation of public and private schools to move to alternative (online) methods education.

## **Methodology**

The design adopted for this study was descriptive survey design. A descriptive survey research design deals with data collection from a large population by drawing a representative sample of such population for the purpose of describing, interpreting, evaluating and analyzing the existing conditions of variables and prevailing situations through the formulation and testing of relevant hypotheses for drawing inferences. The area of the study was Benue state located in North Central Nigeria. The state is divided into three senatorial districts namely 'A', 'B' and 'C'. The state has 297 public secondary schools while

438 are private. The population of the study was 9,182 teachers from all the secondary schools with a sample of 418 respondents. Simple random sampling technique was adopted to sample the respondents on whom the instrument was administered. After deciding the desired number of respondents per school, the researchers visited each secondary school and embarked on simple random sampling where the instrument was administered on the sampled respondents. This was done between October and November, 2020 after schools were reopened in the state after the COVID-19 induced closure of schools. A structured questionnaire developed by the researchers titled 'COVID-19 and Secondary Education Questionnaire, (COSSEQ) was used for data collection. The questionnaire consists of two (2) clusters named Section I and II. Each cluster has ten (10) items totaling twenty (20) items. Section I contains items concerned with the availability of technological infrastructure needed for alternative (online) methods of education in Benue state while Section II elicits information on the level of preparedness of secondary education in Benue state for a move to online education.

A four point modified rating scale was used to establish the disparity in the respondents' opinions. Thus, Very High Extent (VHE) =4; High Extent (HE) =3; Low Extent (LE) =2; Very Low Extent (VLE) =1 were used by respondents to respond to each item in each cluster. A total of 418 copies of the instruments were administered on the respondents by the researchers. The descriptive statistics of Mean Score and Standard Deviation were used to answer the research questions. A cut-off point of 2.50 was used for decision making. The Boundary for Decision Making with respect to positive items was 1.00-1.49=VLE; 1.50-2.49=LE; 2.50-3.49=HE; 3.50-4.00=VHE while the reverse was the case for negative items. t-test statistics was used to test the hypotheses at 0.05 level of significance.

### **Presentation of Results**

**Research Question 1:** What is the level of technological infrastructure in secondary schools for alternative (online) methods of education?

Data collected and analyzed with respect to the above research question is presented on Table 1.

**Table 1:** Mean Scores and Standard Deviation of the level of technological infrastructure in secondary schools for alternative (online) methods of education.

S/ N	ITEM DESCRIPTION	N	V	H	L	V	$\bar{x}$	$\sigma$	Decisi on
			H	E	E	L			
			E			E			
1	Most students and teachers in the school where I teach have email addresses which can be used for education.	418	12	1	87	317	1.01	0.55	L.E
2	Most students and teachers do not have mobile phones with messaging app.	418	265	149	3	0	3.72	0.23	VLE
3	My school has no technology for group/ One-to-one video/audio calls (e.g. Zoom, Skype)	418	298	114	5	0	2.00	0.20	LE
4	My school has no access to online educational games and materials.	418	11	22	70	314	3.45	0.88	LE

5	Most teachers and students in my school do not have phones for teaching and learning.	418285	116	5	11	2.89	1.03	LE
6	There are effective postal services in the area where my school is located.	41812	7	57	341	1.26	0.64	LE
7	Teaching and learning in my school is not done through recorded video, screencasts.	418231	165	9	12	3.15	1.31	LE
8	There are no slide presentations (e.g. PowerPoint) for teaching and learning in my school.	418266	128	16	7	2.21	0.93	LE
9	Social media (Facebook, Edmodo, etc) is used for teaching and learning in my school.	4189	14	126	268	1.24	0.63	LE
10	Virtual classroom, Learning management systems (e.g. Google classroom, Blackboard, Moodle, Schoology) are not available for use in my school.	418266	132	9	10	3.35	1.28	LE
<b>Cluster</b>						<b>2.27</b>	<b>1.05</b>	<b>LE</b>

As shown on Table 1 above, items 1, 3, 5, 7, 8, and 9 which are positively-framed statement had a Mean Score below 2.50. This indicates that respondents indicated that the statements contained in the items existed at low extent while the rest which were negatively-framed items had a Mean Score above 2.50 indicating low extent of the existence of the statements contained by the items. The Cluster Mean Score was 2.77. The implication is that secondary schools have a low level of technological infrastructure for alternative (online) methods of education.

**Ho1.** There is no significant difference in the level of technological infrastructure in urban and rural secondary schools for alternative (online) methods of education

Analyzed data in respect to this hypothesis is presented on Table 2.

**Table 2:** t-test Analysis on the extent of the level of technological infrastructure in urban and rural secondary schools for alternative (online) methods of education.

Type of school	N	x	Std	Level of Sig.	df	t-cal	P-value	Decision
Urban	209	104.25	268.75	.05	3	216.73	.00	Ho rejected
Rural	209	104.25	-76.25					

(P-value=0.00; P<0.05; Ho rejected).

Table 2 shows t-test (t-cal) value of 216.73 at 417df, P<0.05 and Ho rejected. This result reveals that the null hypothesis which states that there is no significant difference in the extent of the level of technological infrastructure in urban and rural secondary schools for alternative (online) methods of education was rejected. This implies that there is a difference in the level

of technological infrastructure in urban and rural secondary schools in Benue state for alternative (online) methods of teaching and learning in the face of pandemic.

**Research Question 2:** What is the extent of preparedness of public and private secondary schools to move to alternative (online) methods of education?

Data collected and analyzed with respect to the above research question is presented on Table 3 overleaf.

**Table 3:** Mean Scores and Standard Deviation of the level of preparedness of public and private secondary schools to move to alternative (online) methods of education.

S/N	ITEM DESCRIPTION	N	VHE	HE	LE	VLE	$\bar{x}$	$\sigma$	Decision
11.	The secondary school where I work has not introduced distance learning solution that is most useful for learners during the current crisis.	418	14	9	126	268	1.2	0.63	VLE 4
12.	In the secondary school where I teach, most teachers have not been exposed to capacity building, personal development and training	418	266	128	16	7	2.3	0.93	LE 1
13.	The management of the school where I teach has issued guidelines for the use of technology in education during the COVID-19 crisis	418	7	10	130	266	1.2	0.63	VLE 4
14.	Lack of technological infrastructure is the biggest challenge to using educational technology for teaching and learning during the COVID-19 in the school where I work.	418	286	115	7	9	2.	1.03	LE 1
15.	I received adequate professional development /training prior to the COVID-19 pandemic concerning how to adjust to providing distance-based learning for students.	418	9	14	126	268	1.2	0.63	VLE 4
16.	The management of the school where I teach did not provide support to make the transition to distance learning easier.	418	230	166	7	14	2.2	1.30	LE 5
17.	The secondary school where I work did not put in place adequate provisions about issues of security and electricity to facilitate a move to online education.	418	236	160	5	17	2.3	1.31	LE 5
18.	The management of secondary school where I work has made no provisions for a move to more online learning to decrease learning inequality among disadvantaged and marginalized students.	418	285	116	5	11	2.	1.03	LE 4



19.	The management of the secondary school where I am teaching has embarked on re-training of teachers in order to move to online education.	418	11	8	58	340	1.2	0.64	VLE
							6		
20.	Teachers in the secondary school where I work have no access to effective technology infrastructure in the school where I teach.	418	260	149	7	1	2.7	0.23	LE
							2		
	<b>Cluster</b>						<b>2.1</b>	<b>1.05</b>	<b>HE</b>
							<b>2</b>		

As shown on Table 3 above, items 11, 12, 14, 16, 17 and 18 which are positively-framed items had a Mean Score above 2.50. This indicates that respondents indicated the extent of the level of preparedness in respect to the items while the rest of the items which are negatively-framed items had a Mean Score above 2.50 were implied to be on a low extent. The Cluster Mean Score was 3.12. The implication is that public and private secondary schools are not prepared for alternative (online) methods of education.

**Ho2** There is no significant difference in the extent of preparation of public and private schools to move to alternative (online) methods education.

**Table 4:** t-test Analysis on the level of preparedness of public and private secondary schools for alternative (online) methods of education.

Type of school	N	x	Std	Level of Sig.	df	t-cal	P-value	Decision
Public	373	104.25	268.75	.05	3	134.9	.00	Ho rejected
Private	28	104.25	-76.25					

(P-value=0.00; P<0.05; Ho rejected).

Table 2 shows t-cal value of 134.9 at 417df, P=>0.05 and Ho rejected. This result reveals that the null hypothesis which states is no significant difference in the extent of preparation of public and private schools to move to alternative (online) methods education was rejected. This implies that there is difference in the extent of preparedness of public and private secondary schools in Benue state are not prepared to embark on alternative (online) methods of teaching and learning in the face of the pandemic.

**Discussion of the findings**

The first finding of this study revealed that there is a difference in the level of technological infrastructure in urban and rural secondary schools in Benue state for alternative (online) methods of teaching and learning in the face of pandemic. This finding implies that most rural secondary schools in Benue state could not make an attempt to embark on alternative (online) methods of teaching and learning as a result of a weak base of technological infrastructure in the institutions. This finding agrees with Ubangu (2020) who found out that the educational system in Africa especially in the rural locations does not have the required capacity to embark on inclusive education in times of crises. Similarly, the finding agrees with Orkula (2020) who found many rural schools in Nigeria had technological infrastructure for information and communication technology as a medium for curriculum instruction.

The second finding of the study shows that there is difference in the extent of preparedness of public and private secondary schools in Benue state are not prepared to embark on alternative (online) methods of teaching and learning in the face of the pandemic. This result implies that both and government and management of public secondary schools were not fully prepared to embark on alternative methods of teaching and learning during the pandemic. This finding agrees with Bandiera, Niklas, Goldstein, Imran and Smurra (2019) who found out that African countries are not fully prepared in terms of technology and policy to offer inclusive education in times of pandemics.

### **Conclusion**

This study found that rural-based secondary schools in Benue state have no technological infrastructure to resort to alternative methods of education during pandemics. Similarly, public secondary schools in Benue state as at the time of this research were not prepared to embark on alternative methods of education in an attempt to mitigate the effects of COVID - 19 on secondary education. From these findings, it is imperative that management of secondary education in Benue state has a lot to do in order avail the recipients of education of the important benefits of this tier of education, hence the following recommendations.

### **Recommendations**

Based on the findings of this study, the researchers recommend that:

1. The management of rural-based and public secondary schools should embark on the acquisition and disbursement of funds for the procurement of technological infrastructure that facilitates the adoption of alternative methods of education. This can be done through sourcing for donor agencies as well as prudent utilization of the funds accruing to the school coffers for the procurement of needed technological infrastructure.
2. The management of rural-based and public secondary schools should act as a persuasive force to the attention of all the tiers of government the need for training teachers in the use of technology in teaching and learning as well as making and implementing workable policies that ensure the procurement, disbursement and utilization of technology in education.

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