



Covid-19 Pandemic Issue and Management of Quality Education in Nigeria

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Abstract. *Traditional communication platforms and virtual digital learning could mitigate the closure of schools during COVID-19 and any other pandemics to enhance effective management of quality education. This study observed the relationship between traditional communication, virtual digital learning and management of quality education in public senior secondary schools in Nigeria. Purposive sampling techniques was used to select 140 principals and 280 teachers from 14 States that have commenced the use of traditional communication platforms and virtual digital learning for teaching students during the lockdown period in Nigeria. Data was collected using Covid-19 Pandemic Issue and Management of Quality Education Questionnaire (CPIMQEQ). The data was analysed using descriptive statistics and t-test statistical analysis. The results revealed that there was significant relationship between traditional communication platforms, virtual digital learning and management of quality education. It was recommended that government should make adequate provision for the use of traditional communication platforms as part of methods of teaching students rather than concentrate on only face-to-face traditional method of teaching to prevent total lockdown of education institution during pandemic so as to improve access to education. Also, government should make provision for necessary tools needed for effective use of virtual digital learning in teaching students and this will in turn help to address problem of school closure during pandemic as well as provision of training and retraining of teacher on digital skill in order to increase the students' engagement and encouraged interaction towards achieving quality education.*

Keywords: COVID-19, digital learning, quality education, management, Nigeria.

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A. INTRODUCTION

The outbreak of COVID-19 pandemic, undoubtedly, has changed the way world used to be. It has resulted in education in educational institutions across the world being obliged to suddenly harness and exploit the virtual digital learning tools to create content for remote learning for students. These are the new styles of instruction that have previously been unexploited in Nigeria particularly in the secondary school arena. Education as a lifesaving sector does not only provides protection and safety but also imparts hope for a brighter future. Hence, continuing education through alternative learning path as soon as possible cannot be overemphasized so as to limit interruption to education system.

Coronavirus pandemic, according to United Nation Educational Scientific and Cultural

Organisation (UNESCO, 2020) is a major global educational crisis. Education is one of the sectors heavily affected with the closure of learning institutions in many countries likely to negatively affect the education quality. The growing of this pandemic has led to closure of education institutions across the world in order to control wide spread of this pandemic. As at April 27, 2020, the coronavirus pandemic has forced more than 163 billion learners out of school in 184 countries and this has led to global learning crisis. Nigeria government and education stakeholders have put in place some measure to promote the continuity of education from home. Some of these school strategies include, the use of traditional communication platforms such as radio and television, digital platforms like the use of social media and digital

such as WhatsApp, Facebook, Zoom and so on. These have been successful in some ways but challenges still remain.

In this era of COVID-19 pandemic, the demand for quality education during the lockdown has suddenly become the concern of all and sundry. In Nigeria, the Federal Ministry of Education (FME) and Universal Basic Education Commission (UBEC) developed “learn at home programme” within the FME website with the aim of providing real-time guidance on learning resources and support for monitoring of learners at home. The supporting services are under three categories. Firstly, the West African Examination Council (WAEC) proliferation to provide resources to support students preparing for examinations through e-learning portal. Secondly, creation of mobile classroom Application lesson resources to all students at no cost during the school lockdown. Thirdly, creation of School Gate for primary school learners to access their subjects for free during COVID-19 pandemic period. Coronavirus issues has force educators around the world talking about the need to reposition education for the betterment of future generation. Recently, COVID-19 presents a number of challenges such as social distancing which prohibits traditional modes of face-to-face education service delivery. These and many other related challenges prompted the Nigeria government and educational stakeholder to embarked on traditional communication platforms and virtual digital learning as measures to ensure quality education.

Numerous studies have been embarked on COVID-19 and other pandemics. Sheu (2020) conducted a study on the impact of closure of universities on education and mental health of students and academic staff due to coronavirus disease. Gokdeniz, Korhan & Eser (2021) carried out COVID-19 pandemic and xenophobia case studies on social theories. Schwartz, Wilson, Boden, Thomas, Bradbury and Fletcher (2020) carried out their own treatises on managing residence workforce and education during COVID-19 pandemic. Walter (2006) in his own research under seek the act of risk assessment in recycling influenza pandemic virus. Xiaojun, Fanfan, Chagwen, Zhiqiang (2019) investigated willingness of self-isolation: Model, empirical test and policy recommendation while facing a pandemic risk. The finding used Chinese subjective norms and perceived behavioural control influence self-

isolation when facing pandemic emergency. The result revealed that SN, ATT and PBC have significant influence on self- isolation during pandemic emergency. There are several areas on COVID-19 pandemic that are yet to be carried out by these scholars. These areas include COVID-19 pandemic issue and management of quality education in Nigeria. Also, there is a little, if any, or possibly no research that have given attention to traditional communication platforms and virtual digital learning as indices to ensure quality education during COVID-19 pandemic particularly in secondary schools. Another noticeable gap that warranted this study is that the locale or area of study of this study differs considerably from the earlier studies. Therefore, this study endeavour to fill the gaps left by the previous scholars. The following objectives have been formulated to guide the conduct of the present study:

- a) Examine the relationship between traditional communication platforms and management of quality education in Nigeria.
- b) Investigate the relationship between virtual digital learning and management of quality education in Nigeria.

Research Hypothesis

The following hypotheses were formulated and answered:

1. There is no significant difference between the mean score of principals and teachers on traditional communication platforms and management of quality education.
2. There is no significant difference between the mean score of principals and teachers on virtual digital learning and management of quality education.

B. METHODOLOGY

Research Design

Quantitative research design was adopted in this study because it helps the researcher to determine the relationship that exist between traditional communication platforms, virtual digital learning and management of quality education. It also supports by giving the researcher the chance to gather the opinion of the sample population, analyze the collected data with appropriate data analysis technique and achieve a reasonable conclusion about the population from the findings of the study (Johnson & Christensen, 2008; Dillman, Jolene & Leah, 2014; Brannen, 2017).

Population and Sampling

This study focused on public senior secondary schools in Nigeria. There are 9, 015 public senior secondary schools and 398,275 teachers in Nigeria as at the time of carrying out this study. The target population comprised 140 principals and 280 teachers. The sample of 140 principals and 280 teachers were chosen with the use of Research Advisor (2006) table of determining the sample size of known population. Purposive sampling technique was used to select the sample of 140 principals and 280 teachers in the 14 States (Lagos, Ogun, Ekiti, Kano, Kebbi, Enugu, Borno, Delta, Jigawa, Kastina, Osun, Kaduna, Oyo & Kogi) in Nigeria that has commence the use of traditional communication and virtual digital learning for imparting knowledge to students during the lockdown. Stratified random sampling technique was used to select sample of 420 participants so as to guarantee that every member of the population was given equal chance of being selected (Creswell, 2012).

Instrumentation

The research instrument for this study was a self-designed questionnaire titled “COVID-19 Pandemic Issues and Management of Quality Education” (CPIMQEQ) and adapted questionnaire. A total of 22 items were used to measure COVID-19 pandemic issues with two subscales: traditional communication platforms (11 items) and virtual digital learning (11 items). The items of questionnaire regarding management of quality education was concluded from Abdullahi (2017) on organizing (6 items) and coordinating (6 items). Participants replied to four-point Likert scale (4= strongly agree; 3 = agree; 2 = disagree; 1 = strongly disagree). The norm mean is given thus: $4 + 3 + 2 + 1 / 4 = 2.50$. The norm mean portrays that any item that is above or equal to the norm mean value of 2.50 is agreed while the one below the norm mean value is disagreed by the participants. (Brown, 2000; Allen & Christopher, 2007) settle that 4-point Likert scale was completed faster and easier than 5 and 7-point Likert scales.

Validity and Reliability

To guarantee the content validity of the instrument, draft copies of the instrument were given to two experts in educational management and two experts in measurement and evaluation. Appropriate corrections and modifications were

made based on their observations and recommendations. Also, 28 corrected copies were further administered to principals and teachers who are part of the sample to observe their clarity and understanding of the item’s wordings, instructions and scales in order to detect if there are any challenges that may arise in filling the questionnaire. Thus, some suggestion made were adjusted properly before sending the final copies. Reliability of the instrument was tested using Cronbach’s alpha as shown in Table 1.

Table 1. Reliability Test for CPIMQEQ

Variable	Sub-variables	N	Cronbach’s alpha	Decision
COVID-19 Pandemic Issue	Traditional communication platforms	11	0.84	All items are reliable and acceptable
	Virtual digital learning	11	0.80	All items are reliable and acceptable
Management of Quality Education	Coordinating	6	0.82	All items are reliable and acceptable
	Organizing	6	0.86	All items are reliable and acceptable

Table 1 shows the result of the reliability test for CPIMQEQ for COVID-19 pandemic issue variables, these are traditional communication platforms and virtual digital learning. The Cronbach’s alpha value for traditional communication platforms is 0.84 covering up to 11 items and 11 items from virtual digital learning with Cronbach’s alpha value of 0.80. Regarding management of quality education indices, the Cronbach’s alpha value for coordinating are 0.82 and 0.86 for organizing. The value for Cronbach’s alpha for this study was proven to be reliable and acceptable. Value above 0.70 are considered reliable and acceptable (Leady & Ormrod, 2005; Diamatopoulos, et.al, 2012)

Procedure for Data Collection

The questionnaire was administered to principals and teachers of the sample public senior secondary schools through their following mediums: WhatsApp, Email and Telegram platforms. Effective inbox of the instruments to the principals and teachers was also aided with the help of colleagues and friends in the sample schools. The questionnaire was sent to over 500 participants comprised of the selected principals and teachers in public senior secondary schools. However, a total of 431 questionnaires were retrieved and filled appropriately. The retrieved number meet the suggestion of Research Advisor (2006) with a number of 420 participants used in this study; in accordance with Kitchener (2000) that emphasized the ethical issues in assuring anonymity and confidentiality of participants responses.

Data Analysis

The data collected for the study were analyzed using descriptive statistics like mean and standard deviation to determine the objectives of the study and Inferential statistics such as t-test for the hypotheses. The t-critical value was compared to the significance level of (0.5) to determine the acceptance or rejection of the hypotheses.

Demographic Profile of Respondents

This section presents a comprehensive result of the analysis made from the data collected in this study. It stated the demographic information of participants who participated using descriptive statistics.

Table 2. Demography Information of the Participants

		N = 420	Percentage (%)
Sex:	Male	233	55%
	Female	187	45%
Age:	21-30	97	23%

	31-40	138	33%
	41-50	112	27%
	51 above	73	17%
Qualific ation:		420	100%
	B.Ed	402	96%
	Master degree	18	4%
Experie nce:		420	100%
	1-10 years	173	41%
	10-20 years	156	37%
	21 years	91	22%
	Above		
		420	100%

Table 2 reveals the demography profile of the participants engaged in this study. From the table, 233 participants (55%) are male and 187 participants are female (45%). Based on average age of the participants, the majority 138 of the participants (33%) are between age 31-40 years while 73 participants (17%) are between age 51 years above. In terms of qualification of the participants, majority 402 participants (96%) are B.Ed while 18 participants (4%) are master degree holders. In addition, majority 173 participants (41%) have 1-10 years of experience while 91 participants (22%) have 21 years above experience in the sample public senior secondary schools.

C. RESULTS

This section discusses the result of the findings based on research objectives.

Traditional Communication Platforms

Objective 1: Examine the relationship between traditional communication platforms and management of quality education.

Table 3 shows the mean and standard deviation response of principals and teachers to the research questionnaire on traditional communication platforms in public senior secondary schools in Nigeria.

Table 3. Mean and Standard Deviation of items on Traditional Communication Platforms

S/N	Traditional Communication Platforms	Principals Responses		Teachers Responses		Decision
		Mean	SD	Mean	SD	
1	Improves access to education, particularly for disadvantaged groups.	2.96	0.974	2.97	0.953	Agreed
2	Helps making available inaccessible learning materials.	2.86	0.984	2.89	0.990	Agreed
3	Provides stimulating and rehearsing of content to aid effective teaching and learning.	2.77	1.038	2.92	0.951	Agreed
4	Serves as a medium of expanding and improving qualitative education.	2.96	0.931	2.81	1.040	Agreed
5	Using television platform motivates learners to learn.	2.88	0.975	2.90	0.988	Agreed
6	Improves literacy and giving students a voice of development.	2.87	0.949	2.93	0.948	Agreed
7	Builds confidence in students.	2.84	1.004	2.87	1.027	Agreed
8	Helps in the long run to make learning an open system.	2.93	0.973	2.89	0.927	Agreed
9	Using of radio platform helps improve the slow learners and the students having poor sight.	2.89	0.976	2.90	0.979	Agreed
10	Covers a very wide geographical area to enhance quality education	2.95	0.912	2.83	1.000	Agreed
11	Improve educational quality and relevance.	2.90	0.964	2.90	0.954	Agreed
Overall mean		2.89	0.977	2.89	0.977	

(Mean \geq 2.50 Agree, Mean $<$ 2.50 Disagree)

The overall perception of the principals and teachers on traditional communication platforms as shown in Table 3 is interpreted as “Agreed” (M = 2.89, SD = 0.977) and (M = 2.89, SD = 0.977). this shows that principals and teachers agreed that traditional communication platforms enhance effective management of quality education in Nigeria. Similarly, all the responses gathered mean values higher than the norm mean value of 2.50. this reveals that principals and teachers agreed that traditional communication platforms i) improves access to education, particularly for disadvantaged groups (M = 2.96, SD = 0.974) and (M = 2.97, SD = 0.953), ii) helps making available inaccessible learning materials (M = 2.86, SD = 0.984) and (M = 2.89, SD = 0.990), iii) provides stimulating and rehearsing of content to aid effective teaching and learning (M = 2.77, SD = 1.038) and (M = 2.92, SD = 0.951), iv) serves as a medium of expanding and improving qualitative education (M = 2.96, SD = 0.931) and (M = 2.81, SD = 1.040), v) motivates learners to learn (M = 2.88, SD = 0.975) and (M = 2.90, SD = 0.988)

vi) improves literacy and giving students a voice of development (M = 2.87, SD = 0.949) and (M = 2.93, SD = 0.948), vii) builds confidence in students (M = 2.84, SD = 1.004) and (M = 2.87, SD = 1.027), viii) helps in the long run to make learning an open system (M = 2.93, SD = 0.973) and (M = 2.89, SD = 0.927), ix) helps improve the slow learners and the students having poor sight (M = 2.89, SD = 0.976) and (M = 2.90, SD = 0.979), x) covers a very wide geographical area to enhance quality education (M = 2.95, SD = 0.912) and (M = 2.83, SD = 1.000), xi) improve educational quality and relevance (M = 2.90, SD = 0.964) and (M = 2.90, SD = 0.954).

Virtual Digital Learning

Objective 2: Investigated the relationship between virtual digital learning and management of quality education in Nigeria.

Table 4 shows reveals the analysis of the responses to the construct of virtual digital learning and management of quality education in Nigeria.

Table 4 The Analysis of The Responses to The Construct of Virtual Digital Learning and Management of Quality Education in Nigeria

S/N	Virtual Digital Learning	Principals Responses		Teachers Responses		Decision
		Mean	SD	Mean	SD	
12	Increases students' engagement and encouraged interaction.	2.87	1.008	2.91	0.959	Agreed
13	Improves collaboration learning.	2.92	0.973	2.77	0.973	Agreed
14	Reduces feeling of isolation among students.	2.93	1.011	2.80	1.022	Agreed
15	Improves effective communication among students.	2.87	0.964	2.84	1.006	Agreed
16	Empowers students to use new ways of sharing information and build a community of learning.	3.00	0.928	2.97	0.944	Agreed
17	Gives student the ability to open up and share opinion.	2.88	1.023	2.93	0.964	Agreed
18	Makes students smarter by developing effective self-directed learning skill.	2.97	0.977	2.82	0.958	Agreed
19	Motivates students to be more engaged in the learning process and interesting in growing their knowledge base.	2.92	0.930	2.70	0.675	Agreed
20	Helps to create and manage class group.	2.89	0.973	2.80	1.027	Agreed
21	Helps call students attention to a real-world approach.	2.85	1.035	2.88	1.023	Agreed
22	Helps to sharpen students' digital skills.	2.92	0.979	2.94	0.922	Agreed
	Overall mean	2.91	0.982	2.85	0.952	

(Mean > 2.50 Agree, Mean <2.50 Disagree)

Table 4 revealed the overall perception of the principals and teachers on virtual digital learning is interpreted as "Agreed" (M = 2.91, SD = 0.982) and (M= 2.85, SD = 0.952). This reveals that the principals and teachers agreed that virtual digital learning improve effective management of quality education in Nigeria. In addition, all responses obtained mean values higher than the norm mean value of 2.50. This shows that principals and teachers agreed that virtual digital learning i) increases students' engagement and encouraged interaction (M = 2.87, SD = 1.008) and (M = 2.91, SD = 0.959), ii) improves collaboration learning (M = 2.92, SD = 0.973) and (M = 2.77, SD = 0.973), iii) reduces feeling of isolation among students (M = 0.93, SD = 1.011) and (M = 2.80, SD = 1.022), iv) improves effective communication among students (M = 2.87, SD = 0.964) and (M = 2.84, SD = 1.006), v) empowers students to use new ways of sharing information and build a community of learning (M = 3.00, SD = 0.928) and (M= 2.97, SD = 0.944), vi) gives student the

ability to open up and share opinion (M = 2.88, SD = 1.023) and (M = 2.93, SD = 0.964), vii) makes students smarter by developing effective self-directed learning skill (M = 2.97, SD = 0.977) and (M = 2.82, SD = 0.958), viii) motivates students to be more engaged in the learning process and interesting in growing their knowledge base (M = 2.92, SD = 0.930) and (M = 2.70, SD = 0.675), ix) helps to create and manage class group (M = 2.89, SD = 0.973) and (M = 2.80, SD = 1.027), x) helps call students attention to a real-world approach (M = 2.85, SD = 0.935) and (M = 2.88, SD = 1.023), xi) helps to sharpen students' digital skills (M= 2.92, SD = 0.979) and (M = 2.94, SD = 0.922)

Hypotheses Testing

T-test statistical analysis was used in this study to test the set hypotheses as follow:

H₀₁: there is no significant difference between the mean scores of principals and teachers on traditional communication platforms and management of quality education.

Table 5. The t-test analysis between the mean scores of principals and teachers'

Variable	N	\bar{x}	SD	DF	T-cal	t-crit	Decision
Principals	140	2.89	0.977	418	0.80	1.96	Accepted
Teachers	280	2.81	0.977				

Table 5 shows the t-test analysis between the mean scores of principals and teachers' responses on traditional communication platforms and management of quality education. The t-calculated value of 0.80 is less than t-critical value of 1.96. This implies that there is no significant difference between the responses of principals and teachers on traditional communication platforms and management of quality education. Thus, the hypothesis which education.

state that there is no significant difference between traditional communication platforms and management of quality education is accepted.

H₀₂: there is no significant difference between the means scores of principals and teachers on virtual digital learning and management of quality

Table 6. The t-test Analysis Between The Mean Scores of Principals and Teachers'

Variable	N	\bar{x}	SD	Df	T-cal	t-crit	Decision
Principals	140	2.91	0.982	418	0.84	1.96	Accepted
Teachers	280	2.85	0.952				

Table 6 reveals the t-test analysis between the mean scores of principals and teachers' responses on virtual digital learning and management of quality education. The t-calculated value of 0.84 is less than t-critical value of 1.96. This implies that there is no significant difference between the responses of principals and teachers on virtual digital learning and management of quality education. Thus, the hypothesis which states that there is no significant difference between virtual digital learning and management of quality education is accepted.

D. DISCUSSION

The findings in Table 3 shows that traditional communication platforms enhance effective management of quality education in Nigeria, such that it improves access to education, particularly for disadvantaged groups, helps making available inaccessible learning materials, provides stimulating and rehearsing of content to aid effective teaching and learning, serves as a medium of expanding

and improving qualitative education, motivates learners to learn, improves literacy and giving students a voice of development, builds confidence in students, helps in the long run to make learning an open system, helps improve the slow learners and the students having, covers a very wide geographical area to enhance quality education as well as improve educational quality and relevance. Results of hypothesis revealed that there is no significant difference between traditional communication platforms and management of quality education in Nigeria.

This finding conforms to Heinich, Molenda, Russel and Maldino (2002) that traditional communication platforms serves as useful tools for teaching and learning at all levels of education. This finding agreed with Sehrish, Sadaf and Rukhsana (2021) that traditional communication method remained popular among the student and teachers for its effective transmission and clear logical of complex concepts in teaching and learning. This finding agreed with Lalima (2012) that using radio for teaching gives students a very clear and interesting explanation of concepts. This finding

also concurs with Kelso, Milne and Kelly (2009) that maintaining social distance by using traditional communication platforms for teaching and learning curb pandemic for a relatively long period.

The findings in Table 4 shows that virtual digital learning improve effective management of quality education in Nigeria, such that it increases students' engagement and encouraged interaction, improves collaboration learning, reduces feeling of isolation among students, improves effective communication among students, empowers students to use new ways of sharing information and build a community of learning, gives student the ability to open up and share opinion, makes students smarter by developing effective self-directed learning skill, motivates students to be more engaged in the learning process and interesting in growing their knowledge base, helps to create and manage class group, helps call students attention to a real-world approach as well as helps to sharpen students' digital skills. Results of hypothesis two shown that there is no significant difference between virtual digital learning and management of quality education. The finding agreed with Schwartz et al (2020) that video-conferencing helps counteract the stress of social distancing recommendation.

This finding also in line with Almosa and Almubarak (2005) that virtual digital learning allows students to discuss with the teachers as well as among themselves at different time. This finding agreed with Gokdeniz, Korhan and Eser (2021) that level of social relationship, close contact, intimacy level and people's socialization have decrease due to spread of COVID-19 pandemic, thus, online media learning is needed to bridge the the feeling of isolation. This finding is germane to Rabah (2005) that objective of the lesson can be accomplished in the shortest time with little amount of effort while using virtual digital learning approaches. However, this finding disagreed with (Akkoyunklu & Soylu, 2006; Hameed et al, 2008; Almosa, 2002; Macharia & Nyakwende, 2010; Dowling et al, 2003; Lewis, 2000) that virtual digital learning may deteriorate school socialization role and the role of teachers as the directors of the process of learning. In addition, virtual digital learning may also bring about congestion and heavy use of some websites (Klein & Ware, 2003; Arkorful & Abaidoo, 2014).

E. CONCLUSION

Traditional communication platforms and virtual digital learning are importance teaching tools in enhancing and improving effective management of quality education while facing the problem of locking down institutions of learning due to pandemic issues. Based on the findings of this study, the researcher concluded that there were no significant differences between traditional communication platforms, virtual digital learning and management of quality education as they were found to connect one another.

The findings of this study will be of useful to government, principals, teachers and stakeholders in education. The findings of this study will help the government and stakeholders to understand the importance of using traditional communication platforms and virtual digital learning to impart knowledge in learners by calling their attention to a real-world approach as well as helps sharpen students' digital skills. Also, this finding will be of benefit to principals and teachers to improve on the use of virtual digital learning approach for them to compete with the their equal in the developed countries towards achieving effective management of quality education. In addition, this finding will serve as reference point for further researchers in the field of education.

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