

## PRINCIPALS' MANAGERIAL COMPETENCIES AND COVID19 LOCKDOWN ENHANCED INNOVATIONS FOR SUSTAINABLE DIGITAL LITERACY AMONG SECONDARY SCHOOL STUDENTS IN BAYELSA STATE

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### ABSTRACT

The study examined the relationship between principals' managerial competencies and covid-19 enhanced-innovations for a sustainable digital literacy among secondary school students in Bayelsa State, Nigeria. A correlational design was adopted for the study. 3 research questions and 1 hypothesis respectively, were formulated to guide the study. The population was all principals and teachers in the 192-government owned secondary schools in the state. A sample of 400 respondents comprising of principals and teachers was used in the study. The instrument for data collection were "Principals' Managerial Competencies Scale (PMCS)" and "COVID-19 Lockdown-Enhanced Innovations Scale (CLIS)" developed by the researchers and validated by experts. The reliability of the instrument was established using Cronbach Alpha formula and a reliability value of 0.89 was obtained. The research questions were answered using mean and standard deviation and the hypothesis was tested using Pearson Product Moment Correlation. The findings revealed that, improved ICT skills, digital awareness, utilization of ICT aided management strategies are major covid-19 lockdown-enhanced innovations in secondary schools in Bayelsa state. Also, principals' managerial competencies have a significant relationship with COVID-19 lockdown-enhanced innovations for sustainable digital literacy among students in secondary school in Bayelsa state. It was recommended that the Government and other stake holders should continue to provide the needed platform to sustain the lockdown-enhanced innovations.

**Keyword:** COVID-19, Lockdown-Enhanced, Innovation, principal, Managerial, Competencies, Digital Literacy

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### INTRODUCTION

COVID 19 is the infectious disease caused by the most recently discovered corona virus. This new virus and disease were unknown before the outbreak began in Wuhan, China in December, 2019. The most common symptoms of COVID 19 are fever, tiredness, dry cough, difficulty in breathing and it is highly contagious. The COVID-19 pandemic has presented an unprecedented crisis for schools around the world. Caught in the eye of this storm, school principals as the chief executive of secondary school, have been responsible for leading their schools through this crisis (WHO, 2020).

Maduabuchi, (2012) submitted that the Principal is the person male or female in charge of the school that plans, directs, controls, coordinates, organizes, advises and solves different problems in the school. The Principal also identifies and sets goals and objectives in the school, analyses tasks and shares responsibilities to the staff, according to area of specialization and

expertise, which is in accordance with the national objectives of secondary education (Ugochi, 2017).

Peretomode (2013) reported that for principals to carry out their responsibilities properly, he/she needs the required managerial skills, which was coined as principals' managerial competencies. Kalagbor (2017) described managerial competencies as those traits a principal needs to effectively identify, mobilize, and utilize scarce human and material resources relevant in education for the purpose of achieving specific educational goals. Maligida (2020) described it as the managerial skills needed for smooth functioning and execution of the entire school system. Umoh and May-Amawhelu (2020) listed the principals' managerial competencies as communication skills, supervisory skills, coordination skills, budgeting, delegating etc.

Akusubo (2021) reported that for the school system to be effective during COVID-19 pandemics, the principal and other stakeholders must display a higher magnitude of managerial competence. This is so because COVID-19 pandemic has been deemed as the greatest global threat the world has faced since the Second World War. Which has ushered immediate consequences that is destructive globally. Akosubo (2021) further averred that the consequences of the pandemic might be dire, but it has offered a unique turning point as well as provided an opportunity to learn, reshape, and build resilience into the educational system of the state.

COVID-19 pandemic has stirred up the need to embed appropriate technology and standards for effective output in teaching and learning at all levels. Omeodu and Charles-Owaba (2021) observed that COVID-19 driven school closure was the crisis the educational system needed to identify and appropriately act to reduce the impact of gaps that existed in our school system. Charles-Owaba (2020) defined COVID-19 lockdown-enhanced innovations as those new ways of teaching and learning that emerged as a result of the COVID-19 lockdown. This included teaching and learning online via the internet using the computer–laptop, desktop, palmtop, phone, etc. and the use of Information and Communication Technology (ICT) facilities. It also involves the use of television and radio stations as a means of keeping the students busy and learning at home, so that the children can be kept safe during the period of the pandemic. Charles-Owaba (2020) submitted that the activities of the innovations ushered by the COVID-19 pandemics in secondary school has the potential to improve digital literacy among students. Digital literacy is the basis upon which a sustainable digital economy can stand. National Digital Economy Policy and Strategy document of Nigeria (NDEPS, 2020), refer to digital economy as: Any aspect of the economy that is based on or driven by digital technologies.

Nigeria Digital Economy Diagnostic Report (2018) defined digital economy as the part of economic output derived solely or primarily from digital technologies with a business model based on digital goods or services. Ajah and Chigozie-Okwum (2019) defined it as the economic activity that result from billions of everyday online connections among people, businesses, devices, data and processes. Karuitha (2020) refer to digital economy as the digital enabling infrastructure needed for computer networks to operate and exist. From the above definitions; it can be succinctly summed up as the economy based on technologies. The digital reflects the move from the third industrial revolution to the fourth industrial revolution. It is using internet as a platform for industry. Ajah and Chigozie-Okwum (2019) defined sustainable digital economy policy as that which enhances digital literacy and skills with a view to improve economic, social and ecological constraints in the country. It represents a catalytic process for social change that seeks to be achieved through education, training and public awareness of

values, behaviours and lifestyles required for sustainable future. It is about learning needed to maintain and improve the quality of life of generation to come.

The policy was enacted on the 12th of June, 2019 and this action was followed by the renaming of Ministry of Communication to Ministry of Communication and Digital Economy. This designation was done on the 17th of October, 2019 to equip the ministry with the responsibility of coordinating the activities related to Nigeria's digital economy. The Nigerian Digital economy Policy and Strategy has been developed to reposition the Nigerian Economy in order to take advantage of the many opportunities that digital technologies provide. The digital economic policy and strategy document is framed on the 8-pillars for acceleration of the National Digital Economy for a digital Nigeria. The 8-pillars are;

- i. Developmental regulation
- ii. Digital literacy and skills
- iii. Solid infrastructure
- iv. Service infrastructure
- v. Digital services development and promotion
- vi. Soft infrastructure
- vii. Digital society and emerging technologies
- viii. Indigenous content development and adoption

Karuitha (2020) forecasts that optimizing the use of digital skills and technologies could generate \$2trillion of additional global economic output by 2030.

Since the principals managerial competencies is needed to stir the secondary school system for effective implementation of the COVID-19 lockdown enhanced innovations, which have involves activities that can improve the digital literacy, hence this paper is aimed at establishing an empirical evidence showing the relationship between principals' managerial competencies and COVID-19 lockdown-enhanced innovations among secondary school students in Bayelsa State.

### **PURPOSE OF THE STUDY**

The main purpose of this study is to determine the relationship between principals' managerial competencies and COVID-19 Lockdown-enhanced innovations for sustainable digital literacy among secondary school students in Bayelsa state. Specifically, this study achieved the following:

- a) To identify principals' managerial competencies in secondary schools in Bayelsa State
- b) To identify COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State
- c) To determine the relationship between principals' managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State

### **RESEARCH QUESTIONS**

The following research questions were raised to guide the study:

- a) What are the principals' managerial competencies adopted in secondary schools in COVID-19 era in Bayelsa State?
- b) What are the available COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State?

- c) What is the relationship between the principals' managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State?

### **HYPOTHESIS**

The under listed hypothesis was formulated and tested at 0.05 level of significance:

H01: There is no significant relationship between principals' managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State

### **METHODS**

This study adopted a correlational design. Gay (2016) described a correlational survey as a study that involves the collecting of data in order to determine whether, and to what degree, a relationship exists between two or more quantifiable variables. This design is considered appropriate for the study because the study seeks to determine the relationship between the independent variable which is principals' managerial competencies and the dependent variable which is COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State.

The population of the study comprised of all the three thousand, five hundred and forty three (3543) teachers' in the one hundred and ninety two (192) Government Secondary Schools in Bayelsa State. Stratified random sampling techniques based on the three senatorial districts in the state, was used to sample 3 out of the 8 local government areas. Simple random sampling was used to select two (2) schools each from the local government areas. The 3 model schools in the local government areas of interest were purposively selected because they are the only urban schools in the area where most of the emerging technologies and innovations are utilized, making it a total of nine (9) schools. All the four hundred (400) respondents consisting of 10 principals and 390 teachers from the nine (9) schools formed the sample of the study.

The instruments for data collection were "Principals' Managerial Competencies Scale (PMCS)" and "COVID-19 Lockdown-Enhanced Innovations Scale (CLIS)" developed by the researchers. The PMCS had 10 items structured on a four-point rating scale of: Very High Extent (VHE)-4 points, High Extent (HE)-3 points, Low Extent (LE)-2 points and Very Low Extent (VLE)-1 point. The instrument was made up of two parts—Part 1 and Part 2. Part 1 contained items bothering on the demographic variables of the respondents while part 2 contained 1 section which measured the managerial competencies adopted. The CLIS had 10 items which measured the available COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State. The face and content of the instrument was validated by one expert in measurement and evaluation, one expert from educational management and planning. Their criticisms and corrections was included in the final draft used in the study. The reliability of the instrument was ascertained through Cronbach Alpha formula using 20 teachers' in secondary schools in a LGA that was not part of the study but possess the same characteristics as the ones used. A coefficient of 0.89 was obtained. The researchers administered the questionnaire through the permission of the school principals' to the respondents. The respondents were informed of the purpose of the research. They were assured of confidentiality in the responses they would give as the data were for research study only. The researchers collected back all the distributed copies of the questionnaire from the

respondents. The data gathered was analyzed using mean and standard deviation for research question 1 and 2, while Pearson Product Moment Correlation was used for research question 3 and test the only research hypothesis. The decision rule for answering the research questions was arrived at by finding the average of the 4-point scale, thus;  $\frac{4+3+2+1}{4} = \frac{10}{4} = 2.50$ ; thus, any item with mean of 2.50 and above was interpreted as Major, while mean score below were interpreted as minor for research question 1 and 2; r-value above 0.50 was interpreted as strong relationship, while the r-value lower than 0.5 was interpreted as weak relationship for research question 3. For the hypothesis, the decision rule is that if the calculated alpha-value is greater than the critical or table value, the null hypothesis would be rejected, otherwise, it would not be rejected.

## ANALYSIS AND RESULTS

**Table1:** Demographic Characteristics of Respondents

Sex	frequency	Percentage
Male	157	39.3%
Female	242	60.7%
Total	400	100
Years of Teaching Experience	Frequency	Percentage %
1-4	5	1.3
5-10	22	5.6
11-14	40	10
15-20	110	27.6
Above 21years	222	55.5
Total	400	100
Educational Qualification	frequency	Percentage
HND/BSC/PGD	312	77.9%
MSC/PhD	88	22.1%
Total	400	100

Researchers' survey (2022)

## RESEARCH QUESTIONS

### Research Question 1

What are the principals' managerial competencies adopted in secondary schools in COVID-19 era in Bayelsa State?

**Table 2:** Mean and standard deviation of responses on principals' managerial competencies adopted during COVID-19 era

S/N	ITEM	N	X	S.D.	Remark
1.	Principals adequately planned for resumption during COVID-19 by given serious consideration to the available space and resources to cater the stipulated protocol.	400	2.75	0.61	major
2.	Principals assigned duties to school members according to their abilities and with the aim to achieve effective coordination.	400	1.85	0.61	Minor
3.	Principals ensured that the different workgroups are effectively coordinated to achieve the set goals.	400	2.86	0.57	minor

4.	Principals continuously, ensured that school members are carried along in the decision making process as it has to do with attaining zero COVID -19 case.	400	2.91	0.59	major
5.	Principals effectively directed the different work groups to ensure no conflict during the pandemic era.	400	2.85	0.60	major
6.	Principals ensured that all incentives/resources such as provision of internet data, mobile devices, ICT gadgets, hand sanitizers, facemask, and other controls were provided to achieve zero COVID -19 case	400	2.96	0.63	major
7.	Principals adopted a periodic evaluation technique of the staff members to ensure maximum compliance.	400	2.48	0.65	major
8.	Principals ensured that staff personnel administration was maintained during this period.	400	2.45	0.65	major
9.	Principals adopted a budgetary control practice that adequately catered for the needs of the season.	400	2.83	0.59	major
10.	Principals ensured that the channels of communication amongst staff and students created room for the achievement of zero COVID -19 cases.	400	1.91	0.66	minor

### Fieldwork (2022)

Data on table 2 indicated that items 1, 4, 5, 6, 7, 8, and 9 had mean ratings above the criterion mean of 2.50 and were adjudged as the major managerial competencies adopted by principals during the COVID19 era in secondary schools in Bayelsa State. On the contrary, item with serial number 2, 3 and 10 had a mean rating below the criterion mean of 2.50 and was adjudged as the minor managerial competencies adopted by principals during the COVID19 era in secondary schools in Bayelsa State.

### Research Question 2

What are the available COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State?

**Table 3:** Mean and standard deviation of responses on available COVID-19 lockdown-enhanced innovations for sustainable digital literacy

S/N	ITEM	N	X	S.D.	Remark
1.	Use of computer aided pedagogy	400	2.57	0.61	Major
2.	Use of mobile devices for teaching and learning	400	2.34	0.61	Minor
3.	Improved digital awareness	400	2.73	0.57	Major
4.	Use of e-assessment strategy	400	2.31	0.59	Minor
5.	Use of e-learning	400	2.84	0.60	Major
6.	Basic knowledge of maintenance of ICT gadgets	400	2.93	0.63	Major
7.	Use of mass media mode of communication	400	2.79	0.65	Major

### Fieldwork (2021)

Data on table 3 indicated that items 11, 13, 15, 16 and 17, had mean ratings above the criterion mean of 2.50 and were adjudged as the major COVID-19 lockdown-enhanced innovations for sustainable digital literacy available in secondary schools in Bayelsa State. On the contrary, item with serial number 12 and 14 had a mean rating below the criterion mean of 2.50 and was adjudged as the minor COVID-19 lockdown-enhanced innovations for sustainable digital literacy available in secondary schools in Bayelsa State.

**Research Question 3**

What is the relationship between the principals’ managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State?

**Table 4:** Correlational analysis on principals’ managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy

		<b>Principals’ Managerial Competencies</b>	<b>Lockdown-Enhanced Innovations</b>
<b>Principals’ Managerial Competencies</b>	Pearson Correlation	1	.476**
	Sig. (2-tailed)		.000
	N	400	400
<b>Lockdown-Enhanced Innovations</b>	Pearson Correlation	.776**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.05 level (2-tailed).

The result in table 4 shows the Pearson Product Moment Correlation analysis on the relationship between principals’ managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa state. The result revealed that the correlational coefficient between principals’ managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy, is  $r=-0.776$ , at  $n=400$ . Since the correlational coefficient is greater than 0.5, then there is strong relationship between principals’ managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy.

**HYPOTHESIS**

H01: There is no significant relationship between principals’ managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State.

The result in table 4 above shows the Pearson Product Moment Correlation analysis on the relationship between principals’ managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa state. The result revealed that the correlational coefficient between principals’ managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy, is  $r=-0.476$ , at  $n=400$  and a p-value less than 0.05 ( $p<0.05$ ). Since the p-value is less than 0.05, then the null hypothesis is rejected. Thus, there is a significant relationship between principals’ managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa state.

**DISCUSSION OF FINDINGS**

The result from research question 1 revealed that the managerial competencies adopted by principals during COVID19 era are planning adequately for resumption during COVID-19 by given serious consideration to the available space and resources to cater the stipulated

protocols, assigning duties to school members according to their abilities and with the aim to achieve effective coordination, ensuring that the different workgroups are effectively coordinated to achieve the set goals, continuously ensuring that school members are carried along in the decision making process as it has to do with attaining zero COVID-19 case, effectively directing the different work groups to ensure no conflict during the pandemic era, ensuring that all incentives/resources such as provision of internet data, ICT gadgets, mobile devices, hand sanitizer, facemask, and other controls were provided to achieve zero COVID-19 case, adopting a periodic evaluation technique of the staff members to ensure maximum compliance, ensuring that staff personnel administration was maintained during this period, adopting a budgetary control practice that adequately catered for the needs of the season and adopting effective communication channel for easy flow of information.

The result from research question 2 revealed that the use of computer aided pedagogy, e-learning and mass media mode of communication, improved digital awareness, acquisition and utilization of basic knowledge of maintenance of ICT gadgets are major COVID-19 lockdown-enhanced innovations for sustainable digital literacy available in secondary schools in Bayelsa State. The use of mobile devices for teaching and learning and e-assessment strategy were minor COVID-19 lockdown-enhanced innovations for sustainable digital literacy available in secondary schools in Bayelsa State.

Results from research question 3 revealed that there is strong relationship between principals' managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy. Also result from the hypothesis revealed that there is a significant relationship between principals' managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa state.

These findings agree with Ikogi, Akangbou and Ayawei (2021), Afangideh, and Abaiola, (2020), Abudulrahman (2014) and Ogbonnaya (2012), who in their scholarly and empirical academic contributions give information on the efficacy of Principals' administrative instrumentalities for sustaining peaceful learning environment.

## **CONCLUSION**

The study has identified the managerial competencies adopted by principals' and COVID-19 lockdown-enhanced innovations available for sustainable digital literacy in secondary schools in Bayelsa state. The study has also affirmed that there is a strong and significant relationship between principals' managerial competencies and COVID-19 lockdown-enhanced innovations for sustainable digital literacy in secondary schools in Bayelsa State.

## **RECOMMENDATION**

Based on the findings and conclusion of the study, the following recommendations are offered:

- 1) Government and other stakeholders should continue to provide the needed platform to sustain the lockdown-enhanced innovations.
- 2) Principals should be trained and motivated to continue to display the required competencies needed to uphold innovations and emerging technologies.

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