



Managing Secondary School Teachers' Innovative Practices during Covid-19 Pandemic for Students' Academic Performance in Bayelsa State

¹Okoko, Tarimotimi, ²Prof. G.G. Kpee

¹Department of Educational Management, Faculty of Education, University of Port Harcourt

E-mail: taribekon@gmail.com.

²Department of Educational Management, Faculty of Education, University of Port Harcourt

E-mail: gospel.kpee@uniport.edu.ng.

ABSTRACT

This study investigated managing secondary school teachers' innovative practices during covid-19 pandemic for students' academic performance in Bayelsa State. 2 research questions and 2 hypotheses were used for the study. The population of the study comprised all the 207 principals in the 207 public secondary schools in the 8 Local Government Areas of Bayelsa State. The sample of this study comprised all the 207 principals in the 8 LGAs in Bayelsa State representing 100% of the population served as respondents. Census sampling technique was used for the study. A valid 12-item instrument titled Managing Secondary Schools Teachers' Innovative Practices during covid-19 pandemic for Students Academic Performance in Bayelsa State Questionnaire (MSSTIPCSAPBSQ) was used for data collection. Cronbach Alpha was used to determine the reliability estimate of 0.86. Mean and standard deviation were used to answer the research questions while the z-test statistics was used to test the hypotheses at 0.05 level of significance. The result amongst others revealed that, the ways to manage curriculum innovative practices of teachers during covid-19 pandemic is to give teachers the opportunity to participate in a blend of synchronous and asynchronous professional development activities to teach, develop them on ICT usage to be able to cope with different packages for internet access and how to use video conferencing/electronic presentation, computer network knowledge applicable to school system. Teachers' innovative practice in instructional materials during covid-19 pandemic are to employ the use of audio-visuals like films, television, audio-visual tapes, CDs, VCDs, DVDs and other high-definition electronic devices to teach and Nigerian. It was recommended that, government needs to provide or improve on electricity supply in all places to enable remote education strive and to embark on massive infrastructural development of all kinds relative to technological educational practices where remote teaching and learning is unavoidable.

Key Words: Teachers' Innovative Practices, Curriculum, Challenges During Covid-19 Pandemic, Students' Academic Performance.

INTRODUCTION

Since the global spread of the deadly COVID-19 Pandemic has significantly changed nearly every aspect of human activities, including education, Bayelsa State in Nigeria is not an exception to the alterations that the pandemic has forcefully enforced. To a large extent, the success of innovative practices in education during the COVID-19 pandemic will depend on the government's willingness to adhere to technological application to teaching in line with the national humanist curriculum designed in the manner seen in other nations around the world and which is supported by stakeholders such as government, schools, teachers, parents, organizations, institutions, individuals, and communities. Keep in mind that the ability for invention, innovation, and creativity would remain characterize humans even if there were no situations like COVID-19.

The rapid changes taking place in economies, governments, and businesses throughout the world are giving rise to a knowledge-driven society. Therefore, in order to meet complex demands that go beyond the simple acquisition of knowledge, it is necessary to foster creative thinking through innovations in order to enable individuals to act in concert to address pressing societal issues (OECD, 2019). The management of teachers' creative activities is inextricably linked to shifts in the teaching profession, which in turn are a reflection of worldwide trends in educational reform. The school's physical environment, which includes the school buildings, staff offices, labs, libraries, amenities for staff and pupils, recreational facilities, etc., has a significant impact on whether or not students are able to focus on their studies.

In the current curriculum practice like in Nigeria, the number of years a student ought to spend schooling has not changed in the curriculum but the timing, teaching methods and instructional practices have changed to suit the current time. These changes have condition teachers, students, parents, government and the society entirely to proffer workable solution on how best all of these subjects can be developed to promote creative learning skills and abilities and active teaching and learning reflecting learner-centred learning approaches in classes (Awang-Hashim, Thaliah, & Kaur, 2017). During this period of Covid-19, the curriculum practice was adjusted to synchronous and asynchronous teaching and learning.

Teachers who are not able to use the Internet for retrieving information and for downloading or preparing resources and teaching needs training so that they can simply handle their teaching profession smoothly in accordance with the curriculum adjustments. Still, Osamudiamen, Anayochukwu, Francis, Frank and Ehimwenma (2021) in their study revealed what should be compulsorily added to the curriculum to synergize the system for full online education like Zoom, Google Classroom, Edmodo, among others which should be added to the school's curriculum. More so, Mbajiorgu (2021) found that, the curriculum need to address the need of teachers to be developed in digital skills by training them on the use of online magazines, training on online teaching and learning, video conferencing and training on how to create and share one's own educational content online that can accommodate children.

On this note, Rafiq, Hussain, and Abbas (2020) figured out lack of adequate technological infrastructure, digital skills and pedagogical resources, and the negative consequences arising from parental illiteracy and financial lack to get their children suitable for online education as some issues affecting teachers' innovative practices in schools. Other significant issues reported are insufficient IT knowledge of faculty members and deficiency of electronic devices. There are other issues relating to lack of parental support or limited internet skills or parents lack of internet enabled mobile devices for online learning, lack of organization/structure on the part of some schools which makes learning ineffective, lack of full concentration as virtual learning is alien to the children in addition to network challenges, insufficient funds, data and electricity to access learning materials at any time (Waqar, 2020).

Statement of the Problem

The changes brought by Covid-19 pandemic have greatly affected the operational design and practices of every school including administrative patterns, leadership styles, approaches, attendance, career skills development and academic calendar operational in the education system. With this, teachers need to adapt their practice and be creative to keep students engaged as every household has become a classroom - more often than not - without an environment that supports learning. It seems teachers are not urgently trained and supported to be technologically abreast with requisite knowledge and skills on ICT to cope with the current trend of educational activities brought by the pandemic. It seems teachers are not digitally competent enough to cope with the new innovations in teaching and learning and to provide strategies for the development of these skills in their students.

No matter how important it is for students to be prepared to adapt to the new ways of learning, it seems students are unable to do remote learning because there are poor Internet services, lack of electricity supply to charge their appliances, many do not have the resources to provide the required tools to ease them in online classes which would definitely affect their academic performance. It seems lack of free internet access in Bayelsa State has made it difficult for teachers and students to access the internet constantly to attend to academic issues, and the cost of data has even made it worse for students to engage in e-learning activities. It is on this note that the research investigated managing secondary school teachers' innovative practices during COVID-19 pandemic for students' academic performance in Bayelsa State.

Aim and Objectives of the Study

The study investigated managing secondary school teachers' innovative practices during covid-19 pandemic for students' academic performance in Bayelsa State. The objectives of the study are to:

1. Examine the ways innovative changes in the curriculum are managed during COVID-19 pandemic for students' academic performance in Bayelsa State.
2. Identify the challenges principals face in managing teachers' innovative practices during COVID-19 pandemic for students' academic performance in Bayelsa State.

Research Questions

1. In what ways are innovative changes in the curriculum managed during COVID-19 pandemic for students' academic performance in Bayelsa State?
2. What are the challenges principal face in managing teachers' innovative practices during COVID-19 pandemic for students' academic performance in Bayelsa State?

Hypotheses

1. There is no significant difference between the mean scores of principals in rural areas and principals in urban areas on ways innovative changes in the curriculum are managed during COVID-19 pandemic for students' academic performance in Bayelsa State.
2. There is no significant difference between the mean scores of principals in rural areas and principals in urban areas on the challenges principal face in managing teachers' innovative practices during COVID-19 pandemic for students' academic performance in Bayelsa State.

Methodology

In this study, researchers used a descriptive survey approach. The study's sample included all 207 principals in Bayelsa State's public secondary schools throughout the state's eight LGAs and the capital city. A total of 35 languages are spoken in Yenagoa, Nigeria: Brass (12), Ekeremor (24), Nembe (16), Ogbia (34), Sagbama (29), Southern Ijaw 1 (21), and Southern Ijaw 2 (20). All of the 207 principals from the 207 public secondary schools throughout the 8 LGAs and the capital of Bayelsa State made up the study's sample, which is thus representative of the whole state's population. The research employed a census sampling methodology. This makes use of all the fundamentals that comprise the populace at large. Meanwhile, only 202 of the 207 questionnaires that were sent out were returned, thus they were the ones included in the analysis.

A 12-item with the catchy title of "Managing Secondary Schools Teachers' Innovative Practices during the COVID-19 pandemic for Students' Academic Performance in Bayelsa State" was used. Furthermore, the respondents were asked to rate their level of agreement with various aspects of the instrument (questions) using a modified 4-point Likert scale (Strongly Agree (SA) = 4 points, Agree (A) = 3 points, Disagree (D) = 2 points, and Strongly Disagree (SD) = 1 point). Cronbach's alpha was used to determine the instruments' reliability coefficients with a sample of 30 principals, and the overall reliability coefficient of 0.86 was obtained. All retrieved copies of questionnaire was used for data analysis. Mean and standard deviation were used to answer the research questions while the z-test statistics was used to test the hypotheses at 0.05 level of significance.

Results and Discussion

Research Question 1: What are the ways of managing curriculum innovative practices of teachers during COVID-19 pandemic for students' academic performance in Bayelsa State?

Table 1: Mean Responses and Standard Deviation Analysis of rural principals and urban principals on the ways of managing curriculum innovative practices of teachers during COVID-19 pandemic for students' academic performance in Bayelsa State.

S/N	Items	Principals in Rural Areas (149)		Principals in Urban Areas (53)		$\bar{X}_1\bar{X}_2$	Remark
		\bar{X}	SD	\bar{X}	SD		
1	Teachers are given the opportunity to participate in a blend of synchronous and asynchronous professional development activities to teach	3.46	1.39	3.57	1.55	3.52	Agreed
2	Teachers be creative to employ pre-recorded video to demonstrate and share good practice while teaching	3.29	1.37	2.50	1.82	2.90	Agreed
3	Develop teachers on Information and Communication Technology usage to be able to cope with different packages that are used to access the internet to source relevant information	3.49	1.52	3.57	1.60	3.53	Agreed
4	Development of teachers on how to use video conferencing/electronic presentation, computer network knowledge applicable to school system	3.01	1.23	2.80	1.14	2.91	Agreed
5	Teachers being managed to imbibe Web-based class meetings and messaging applications to communicating with learners and the education community	3.65	1.60	3.60	1.57	3.63	Agreed
6	Teachers being packaged to turned to ICT and move to online delivery of lessons.	3.32	1.38	3.06	1.25	3.19	Agreed
Average mean and standard deviation		3.37	1.42	3.19	1.48		

The item with the highest average score was number 5, followed by items 3, 3,5, 2, 1, 355, 6, 3,19, 4, and 2.90. All of the scores were better than the minimum acceptable score of 2.50. This simply means that educators should be provided with opportunities to engage in both live and recorded forms of professional development, that educators should be encouraged to use recorded video to demonstrate and share good practice in the classroom, and that educators should be trained to use ICT to boost student achievement during the COVID-19 pandemic.

Research Question 2: What are the challenges of managing teachers' innovative practices during COVID-19 pandemic for students' academic performance in Bayelsa State?

Table 2: Mean Responses of rural principals and urban principals on the challenges of managing teachers' innovative practices during COVID-19 pandemic for students' academic performance in Bayelsa State.

S/N	Items	Principals in Rural Areas (149)		Principals in Urban Areas (53)		$\bar{X}_1\bar{X}_2$	Remark
		\bar{X}	SD	\bar{X}	SD		
1	In many schools, technological infrastructures for remote learning are grossly lacking	3.46	1.39	3.57	1.55	3.52	Agreed
2	In many schools, required number of teachers with appropriate digital skills to effectively carry out remote teaching and learning are readily available	1.89	1.27	2.12	1.18	2.01	Disagreed
3	Financial challenges to provide students with required appliances to learn remotely	3.49	1.52	3.57	1.55	3.53	Agreed
4	Low bandwidth/ poor Internet services to cope with increased data usage	3.01	1.23	2.80	1.14	2.91	Agreed
5	No electricity or epileptic electricity supply	3.65	1.60	3.60	1.57	3.63	Agreed
6	Negative consequences arising from parental illiteracy to supporting students remotely	3.29	1.37	2.5	1.82	2.90	Agreed
Average mean and standard deviation		2.52	1.40	3.03	1.47		

Table 2 shows that item #5 had the highest average score (3.63), followed by items 1 (3.52), 3 (3.53), 4 (2.91), 6 (2.90), and 2 (2.01). The scores were all above the criterion mean of 2.50 with the exception of question 5. Due to lack of technological infrastructure for remote learning, financial difficulties in providing students with necessary appliances for remote learning, low bandwidth/poor internet services to cope with increased data usage, lack of electricity, or erratic electricity supply, and the resulting negative consequences for students' academic performance, many schools are struggling to manage teachers' innovative practices during the COVID-19 pandemic. However, the item 2 mean score of 2.01 is lower than the criterion mean of 2.50, suggesting that many institutions lack access to sufficient numbers of instructors with appropriate digital skills to carry out remote teaching and learning.

Test of Hypotheses

Ho₁: There is no significant difference between the mean scores of rural principals and urban principals on the ways of managing curriculum innovative practices of teachers during COVID-19 pandemic for students' academic performance in Bayelsa State.

Table 3: z-test Analysis of the Difference between the mean ratings of Principals in Urban and Rural Areas s on the ways of managing curriculum innovative practices of teachers during COVID-19 pandemic for students' academic performance in Bayelsa State.

Subject	N	\bar{x}	SD	Df	z-cal.	z-crit.	Level of Sig	Remark
Principals in Rural Areas	149	3.37	1.38	2				
				200	0.77	±1.96	0.05	Accepted
Principals in Urban Areas	53	3.19	1.48					

The computed value of z, 0.77, in table 7 is less than the z-critical value of 1.96 at a degree of freedom of 200 and a significance level of 0.05. As a result, we accept the null hypothesis and maintain that, in Bayelsa State, there is no statistically significant difference between the mean scores of rural and urban principals on the ways in which they managed the innovative pedagogical practices of teachers in the classroom during the COVID-19 pandemic on student academic performance.

Ho₂: There is no significant difference between the mean scores of rural principals and urban principals on the challenges of managing teachers' innovative practices during COVID-19 pandemic for students' academic performance in Bayelsa State.

Table 4: z-test Analysis of the Difference between the Opinions of rural principals and urban principals on the challenges of managing teachers' innovative practices during COVID-19 pandemic for students' academic performance in Bayelsa State.

Subject	N	\bar{x}	SD	Df	z-cal.	z-crit.	Level of Sig	Remark
Principals in Rural Areas	149	2.52	1.40	2				
				200	-2.20	±1.96	0.05	Accepted
Principals in Urban Areas	53	3.03	1.47					

Table 4 shows that at the 0.05 level of significance, the computed value of z (-2.20) is less than the critical value of z (1.96) for a sample size of 200. Since the mean ratings of rural and urban principals on the difficulties of controlling teachers' creative practices during the COVID-19 epidemic for students' academic achievement in Bayelsa State were not significantly different, the null hypothesis was accepted.

Summary of Findings

The study found that, in order to manage curriculum innovative practices of teachers during the COVID-19 pandemic, it is necessary to provide teachers with opportunities to participate in a mix of synchronous and asynchronous professional development activities to teach, to use pre-recorded video to demonstrate and share good practice while teaching, and to develop them on ICT usage in order to be able to deal with different packages for internet access and know how to use video conferencing/electronic presentations. When comparing rural and urban principals in Bayelsa State, there is no statistically significant difference in their mean scores on how to manage teachers' creative use of the curriculum to improve student achievement during the recent COVID-19 epidemic.

It was found that, in many schools, technological infrastructure for remote learning is severely lacking, financial challenges exist to provide students with required appliances for remote learning, low bandwidth/poor internet services exist to cope with increased data usage, no electricity or epileptic electricity supply exists, and negative consequences arise as a result of parental illiteracy to support their children's remote learning. There was no statistically significant difference between rural and urban principals' mean ratings on the difficulty of guiding teachers' creative responses to the COVID-19 pandemic's impact on students' grades in Bayelsa State.

Discussion of Findings

Firstly, this study is in consonance with the study of Osamudiamen, Anayochukwu, Francis, Frank and Ehimwenma (2021) who carried a research work on evaluating the impact of COVID-19 pandemic on education in Nigeria, the study made known the level of acceptance of online teaching and learning among teachers and also revealed what should be compulsorily added to the curriculum to synergize the system for full online education like Zoom, Google Classroom, Edmodo, among others which should be added to the school's curriculum. The findings is in line with the findings of Mbajiorgu (2021) who found that, in a post COVID-19 era, the curriculum need to address the need of teachers to be developed in digital skills by training them on the use of online magazines, training on online teaching and learning, video conferencing and training on how to create and share one's own educational content online that can accommodate children.

The second finding of Rafiq, Hussain, and Abbas (2020) corresponds with this current study in the sense that, the study figured out lack of adequate technological infrastructure, digital skills and pedagogical resources, and the negative consequences arising from parental illiteracy and financial lack to get their children suitable for online education as some issues affecting teachers' innovative practices in schools. Other significant issues reported are insufficient IT knowledge of faculty members and deficiency of electronic devices. This study also aligned with some key findings of Peter, Philipa and Felix (2021) whose work revealed students' satisfied with virtual learning embarked upon by many higher institutions throughout the country during the COVID-19 lockdown and would not want the online learning to continue after the pandemic due to poor internet infrastructure and lack of electricity.

Conclusion

From the foregoing, it is clear that the COVID-19 pandemic has had a major effect on the educational system, requiring substantial modifications to the curriculum in terms of its general structure and specific content, as well as modifications to teaching methods and instructional strategies. For the new trend in education to be rationally realized, it is not enough to simply provide for and well develop teachers, students, parents, and others; they must also be provided for and developed in order for them to successfully adapt to the situation and conditions of new practices. Despite these, many challenges still tend to affect the system negatively like epileptic electricity supply, insufficient or lack of infrastructural facilities, no workable policies on the new trend, insufficient financial provision to acquire necessary appliances to continue online or blended learning and more.

Recommendations

Based on the findings of the study, the researchers recommended that:

1. There is urgent need to blend the curriculum with new technological practices of teaching and learning to synergize the programmes of education in a holistic manner that would make the system of education to run on a sustainable growth path requisite to achieve its goals.
2. Government needs to provide or improve on electricity supply in all places to enable remote education strive and to embark on massive infrastructural development of all kinds relative to technological educational practices where remote teaching and learning is unavoidable.

REFERENCES

Awang-Hashim, R., Thaliah, R., & Kaur, A. (2017). A cultural insight into the development of teacher autonomy support scale. *Journal for Multicultural Education*, 11(4), 287-305. doi:<https://doi.org/10.1108/JME-09-2016-0050>.

Mbajorgu, M. C. (2021). Investigated caregiver's developmental needs for effective care delivery in a post COVID-19 era in Rivers State. *Arabian Journal of Business and Management Review* 6(10), 40–47.

OECD, (2019). *Education responses to COVID-19: Embracing digital learning and collaboration*, OECD Publishing, Paris. <http://www.oecd.org/coronavirus/en/>.

Osamudiamen, E, Anayochukwu, C.O, Francis, I, Frank, I.A & Ehimwenma S.O. (2021). Evaluating the impact of COVID-19 pandemic lockdown on education in Nigeria: Insights from teachers and students on virtual/online learning. *International Journal of Innovative Education Research* 8(3), 63-68.

Rafiq, F., Hussain, S., & Abbas, Q. (2020). Analyzing students' attitude towards E-learning: A case study in higher education in Pakistan. *Pakistan Social Sciences Review*, 4(1), 367- 380.

Waqar, K. (2020). *Going online: Lessons from the classroom*. <https://www.dawn.com/news/1563247>.