

**EFFECT OF COVID-19 ON STUDENT'S ACADEMIC PERFORMANCE IN MATHEMATICS
IN WASSCE IN ILORIN WEST LOCAL GOVERNMENT AREA OF KWARA STATE**

BY

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Abstract

This study analyzed the effect of covid-19 on the academic performance of students in WASSCE in Ilorin West Local Government Area of Kwara state. Three hypotheses were formulated. Data collected were analyzed using chi-square at 0.05 level of significance. Schools were enabled to finish their syllabus due to covid-19 issue and private teachers from private school were not paid. Some recommendations were given which include: the school should try to adjust their scheme of work and the principal of private schools should try to assist their teachers, parents should pay personal attention to monitor and supervise their children until they adapt to online teaching environment, educators as well as students must be trained on how to handle and use online educational devices. Educators must spend quality time to prepare and make their lessons creative, interactive, relevant, student-centered and group-based. Data collected were analyzed using the chi-square method. Some suggestions and recommendations were given in this paper.

Keywords: *Covid-19, Academic performance, Mathematics, Students and WASSCE*

Introduction

The covid-19 pandemic as introduced uncertainty into major aspects of national and global society including schools. All schools worldwide suspended classroom teaching due to the novel Corona virus pandemic and switched to online teaching. The current cross-sectional study was carried out to analyze the academic performance of students in Mathematics during covid-19 in Ilorin West Local Government Area of Kwara State. Zhu, Zhang, Wanga, Lix, Yang and Song (2019) said corona virus disease in 2019 (covid-19) is firstly identified in Wuhan city, Hubei Province in China in December 2019 as a pneumonia of unknown origin. Later the International Committee on Taxonomy of Virus (ICTV) 2020 identifies the causative agent of covid-19 as a novel corona virus, severe acute respiratory syndrome corona virus - 2. Covid-19 outbreak spreads rapidly not only in China but also worldwide, therefore the world health organization has announced it as pandemic 2. On March 12, 2020.

Bedford, Gerry, Hatch (2020) stated that the total number of confirmed cases and mortality are 23,491,520 and 809,980 respectively in 216 countries as of August 25, 2020. Gostin and Wiley (2020) said several governmental disease spreading. These measures include travel restrictions, mandatory quarantines for travelers, social distancing, bans of public gatherings, school closures, business closure, self isolation, asking people to work at home, curfews and lockdown. Paital and Parida (2020) also stated that activities in several countries worldwide here declared either lockdown or curfew as a measure to break the fast spread of virus infection. These measures have a negative worldwide effect on the Business, Education, Health and Tourism. Sahul (2021) said Due to the suspension of classroom teaching in many schools, a switch to the online teaching for the students becomes effective. This form of learning provides an alternative way to minimize either the contact between students and teachers.

Between April and August (2020) Human rights watch conducted 57 remote interviews with students, parents, teachers and Education official across Burkina Faso, Cameroon, the Democratic Republic of Congo, Kenya, Madagascar, Morocco, Nigeria, South Africa and Zambia to learn about the effect of the pandemic on children's education, research shows that school closure caused by the pandemic exacerbated previously existing inadequate, and that children who are already most at risk of being excluded from a quality Education have been most affected. The first case of covid-19 was reported in Nigeria by the federal ministry of Health on 27th February, 2020. This was the case of an Italian citizen

who work in Nigeria and returned from Milan, Italy to Lagos, Nigeria on the 25th of February 2020. Since then, the number of confirmed cases of infection keeps rising both in Nigeria and across the globe. Nigeria placed a travel ban on 13 countries with high cases of the virus, the countries are United State, United Kingdom, South Korea, Switzerland, Germany, France, Italy, China, Spain, Netherland, Norway, Japan and Iran in 11th of march 2020, World Health Organization (WHO) declares covid-19 as pandemic. A pandemic is a disease that has spread a large region: For instance, multiple continents or worldwide. There is no doubt that some students who have just graduated from universities or other higher institutions could not secure a job, since industries, companies, Government, parastatals, schools as well as institutions were shutdown. Some of them were not mobilized for the one-year compulsory National Youth Service in Nigeria those that were in orientation camps before the outbreaks of covid-19 were not posted to their placed of primary assignment for the first 6months of their service year due to the lockdown. However, many students have no access to the online teaching due to lack of either the means of the instruments due to economical and digital divide (UNESCO 2020).

Exposito and Principi said that the national lockdown of Educational Institution in Yobe State and across Nigeria have caused a major interruption in students learning: disruptions in an academic program, suspension of terminal Examination (NECO and WAEC), creating gap in teaching and learning and probably caused manpower shortage in the institutions as a result of a death caused by Covid 19.

Purpose of the Study

The purposed of the study is to analyzed the effect of covid-19 on the academic performance of students in WASSCE in Ilorin West Local Government Area of Kwara State and also to find out whether the students perform better during Covid-19 or not. Also to find out whether the students perform better during covid 19 than their performance in 2018 and 2019.

Research Questions

The following are the research questions raised.

1. Do students perform better during covid-19 than their performance in WASSCE in 2018.
2. Do students perform better during covid-19 than their performance in WASSCE in 2019.
3. Do students perform better during covid-19 than their performance in WASSCE in 2018 and2019.

Research Hypotheses

The following are the research hypotheses formulated:

- Ho₁: There is no significant difference in students' academic performance in mathematics during covid-19 and their performance in WASSCE in 2018.
- Ho₂: There is no significant difference in students' academic performance in mathematics during covid-19 and their performance in WASSCE in 2019.
- Ho₃: There is no significant difference in students' academic performance in mathematics during covid-19 and their performance in WASSCE in 2018 and 2019.

Methodology

Research design refers to the overall strategy utilized to carry out research that defines a succinate and logical plan to tackle established research question through the collection, Interpretation analysis and discussion of data (WIKIPEDIA). The research design adjusted for this study is the descriptive survey method. The study population comprises of all students in Ilorin West Local Govt. Area of Kwara State. There are 58 secondary schools in Ilorin West Local Government Area of Kwara State. The sample for the study consists of 8 selected schools. The sample schools were selected using random sampling techniques which helped the researchers to choose sampled schools by chance. The instrument used for the study was preformat of WASSCE results for the year 2018, 2019 and 2020 which were collected from the principal of the 8 schools selected. A measuring instrument is valid when it measures truly and accurately the quality or ability one wants to measure. The Preformat has gone through validation of the

examination body WASSCE before it was released. The result, therefore, is authentic and validated. For the purpose of data collection, the researcher personally visited the eight sampled schools in order to obtain the WASSCE results from 2018 to 2020. The investigator sought permission from the principal in each schools and the principal later directed the researcher to the vice principal who is in charge of the results. The researcher makes use of students' examination computer sheets, which contained the results of every student's in the school. In analyzing the data collected, chi-square statistic was applied to compare the academic achievement of students between years 2018 and 2020. The techniques employed suited the hypotheses formulated because of their ability to determine whether or not the calculated values are significant at various limits.

Results

Analyzing the students' academic performance before and during covid-19 followed and discussion of findings of the hypotheses tested.

Table 1

The table presents the total number of students that passed and failed the WASSCE in all the selected schools in Ilorin West local government area of Kwara state in the year 2018 to 2020.

	2018			2019			2020	
	WASSCE			WASSCE			WASSCE	
	P	F		P	F		P	F
A	273	3		320	23		24	47
B	81	21	64	11		38	61	
C	63	14		61	17		64	22
D	57	16		65	16		71	34
E	62	20		126	22		84	24
F	10	18		30	9	34	65	
G	56	24		25	84		1	34
H	38	24		76	23		45	32
TOTAL	640	140		767	129		401	319

Testing the hypotheses

In order to test the hypotheses for this study, chi-square method was used.

HO1: There is no significant difference in the academic performance in mathematics during covid-19 and their performance in WASSCE in 2018.

Table 2

YEAR	PASS	FAIL	TOTAL
2018	640	140	780
2020	401	319	720
TOTAL	1041	459	1500

Table 3

Year	Pass	Fail	R Total	DF	X ² CAL	X ² Crit	Level of Design	Decision
2018	640	140	780		9.35	3.84	0.05	
2020	401	319	720	1				Rejected
Total	1041	459	1500					

The calculated chi-square is 9.35 at the level degree 0.05 which is greater than the table value 3.84. Therefore, the hypothesis is hereby rejected. That means there is significant difference in the academic performances of student's results in mathematics at WASSCE in all the eight (8) selected schools in Ilorin West Local Government area of kwara state during covid-19 and the year 2018.

HO2: There is no significant difference in the academic performance In mathematics during covid-19 and their performance in WASSCE in 2019.

Table 5

YEAR	PASS	FAIL	TOTAL
2019	767	129	896
2020	401	319	720
TOTAL	1168	448	1616

Table 6

Year	Pass	Fail	R Total	DF	X ² CAL	X ² crit	Level of Design	Decision
2019	767	129	896		9.35	10.24	0.05	
2020	401	319	720	1				Accepted
Total	1168	448	1616					

The calculated chi-square is 9.35 at the level degree 0.05 which is greater than the table value 10.24. Therefore, the hypothesis is hereby accepted. That means there is no significant difference in the academic performances of student's results in mathematics at WASSCE in all the eight (8) selected schools in Ilorin West Local Government area of kwara state during covid-19 and the year 2019.

HO3: There is significant difference in the academic performance in mathematics during covid-19 and their performance in WASSCE in 2018 and 2019.

Table 7

YEAR	PASS	FAIL	TOTAL
2018& 2019	1407	269	1676
2020	401	319	720
TOTAL	1808	588	2396

Table 8

Year	Pass	Fail	R Total	DF	X ² CAL	X ² crit	LEVEL OF DESIGN	Decision
2018&2019	1407	269	1676		9.35	12.04	0.05	
2020	401	319	720	1				Accepted
Total	1808	588	2396					

The calculated chi-square is 12.04 at the level degree 0.05 which is greater than the table value 3.84. Therefore, the hypothesis is hereby accepted. That means there is significant difference in the academic performances of student's results in mathematics at WASSCE in all the eight (8) selected schools in Ilorin West Local Government area of kwara state during covid-19 and the year 2018 and 2019.

Discussion

From the findings of this study as shown on table 1, it can be inferred that there was mass failure in 2020. This shows that covid-19 affected the performance of WASSCE result in 2020. In table 1 above there were 319 students that failed in 2020 out of 720 students that sat for the Examination, in year 2018 only 140 failed out of 780 students that sat for the Examination and in year 2019 only 129 students failed out of 767 that sat for the Examination. Performance disadvantage experienced by eighth graders who missed school relative to students with perfect attendance in the last month, by number of days missed. Of course, the various approaches examined by the research on learning time assume two groups of students: those who are missing some learning time in school and those who are not.

Conclusion

The advent of the covid-19 pandemic has not only revealed the poor state of infrastructure and facilities in the health sector of Nigeria but also revealed the reality of the dilapidation and poor funding of the

Education sector. Aside from the health sector, no other area has suffered the impact of covid-19 like Education. Many children were out of school even before the pandemic and even more have dropped out due to the pandemic. The learn from home teaching method introduced by the Nigeria ministry of Education to teach through radio and television is not yielding the desired result as the electricity supply in the nation is below average and the majority of Nigerians are living below the poverty line and cannot afford television or radio.

Recommendations

The following are the recommendations.

1. Parents should pay personal attention to monitor and supervise their children until they adapt to online teaching environment.
2. Educators as well as students must be trained on how to handle and use online educational devices. Educators must spend quality time to prepare and make their lessons creative, interactive, relevant, student-centered and group-based.
3. Government should see the need to build good schools and equip them with modern digital facilities that can aid online Education by providing digital devices as well as internet connections.
4. Government should reduce the maximum number of lessons per week for teachers. This would afford them adequate time to prepare and deliver the content effectively and efficiently.

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