

**COVID-19 PANDEMICS AND IMPLICATIONS ON ACADEMIC PERFORMANCE OF
BIOLOGY STUDENTS IN AL-HIKMAH UNIVERSITY, ILORIN, NIGERIA**

BY

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Abstract

This paper examined the Covid-19 Pandemics and implication on academic performance of Biology Students in Al-Hikmah University, Ilorin. Two research questions guide the study. A survey method was used for this study. The population consisted of 50 biology students in Al-Hikmah University. A purposive sampling technique was employed in selecting the biology students in the schools. Two instruments; a structured questionnaire and academic performance proforma (APP) was used. Descriptive was used to describe data analysis. Mean and standard deviation score was used to present results of response to research question was used to test variables. Results shows that there is no significant impact of covid-19 lockdown on learning Biology among students in Al-Hikmah ($r = 1.23 > t.value = 0.997$). The study also found that there is no significant impact of covid19 lockdown on the academic performance of Biology students in Al-Hikmah ($r = 1.12 > t.value = 0.997$). Base on the conclusion, the study recommended that the management of Al-Hikmah University should continue to adopt more educational friendly technologies and expand the ICT infrastructural facilities that will support online learning in all schools especially in Biology. The school management should ensure that Head of Departments especially Biology department make use of ICT for teaching and learning of biological concepts mandatory for teachers and learners. This would avoid learning breakup in case of any eventuality like covid-19 pandemic.

Keywords: Academic Performance, Biology, covid-19 pandemic and Performance

Introduction

According to the World Health Organization (WHO), Corona viruses are family of viruses that causes illnesses that ranges from common cold to more severe diseases such as severe acute respiratory syndrome (SARS) and the Middle East Respiratory Syndrome (MERS). Most infected patients are asymptomatic, not showing any symptoms of the virus in their systems (Ajazeera, 2020). Covid-19 pandemic have a great influence on the world educational system and serve as awakening engine for many countries to change the traditional face to face mode teaching and learning (Vargas-Ramos, et al, 2022). Saliu (2020) and Yamin (2020) submitted that most institution of higher learning change to online teaching for their undergraduate and graduate students for effective teaching and learning. All the level of education system has been affected by the covid-19 pandemic (Nicola et al, 2020). Educational institutions around the world (in 172 countries) have either temporarily closed or implemented localized closures affecting about 1.7 billion student populations worldwide (UNESCO,2020) Bedford et al, (2020); Gostin and Wiley (2020) reported that several measures have been taken by government to check the spread of these diseases. This includes travelling restriction, social distancing, compulsory quarantines, ban on public gathering, closure of institutions, self- isolation and curfews and lockdown. This was in agreement with (Paital, et al; 2020) that asserted that to stop the spread of this virus most government of the nation have either declared curfews or lockdown.

During the covid-19 pandemic most institution of learning is closed down to forestall the spread of this virus by the Federal Ministry of Education (Azeezat, 2020). Due to covid-19 pandemic, many higher institutions closed down their activities to reduce the spread of this virus which led to higher economical, medical and social implication on both undergraduate and postgraduate communities (Nicolas et al, 2020; Esposito & Principi, 2020). The global outbreak of covid-19 pandemic has made countries around the world to shift their attention to adopt the use of ICT into the educational system (Marinoni, et al, 2020). The reason is that the lockdown and social distancing measure due to the covid-19 pandemic have led to closures of schools, training institutes and higher education facilities in most countries. There is paradigm shift in the way educators deliver quality education- through various online platforms such as video conferencing, teleconferencing, zoom, and social media platforms (Khan, 2020). The online learning, distance and continuing education have become a panacea for this unprecedented global pandemic, despite the challenges posed to both educators and the learners. The impact of covid-19 pandemic lockdown has been largely felt by all education stakeholders like students, teachers and education administrators. Many children received no education after schools closed across the continent in March 2020 (Human Rights

Watch, 2020). Students were also face with an increase in fear, anxieties and stress arising from non-accessibility to technologies for e-learning and inefficiency of institutions to adopt new technologies during the pandemic periods (Hasan, & Bao, 2020; Lovón, & Cisneros, 2020; Valdivieso, Burbano & Burbano, 2020).

The covid-19 pandemic has been found to have a links on the academic performance of secondary school students in some school subjects like biology. The teaching and learning of biology in our secondary school his faced with a lot of problems. The poor performance in the field of science is due to poor number of unqualified biology teachers, class overcrowded and absence of well-furnished science laboratory. Suzana, et al. (2011) confirmed from his study that students performed excellently in lesson taught with experiment and practical than those with only lecture method. The poor results of biology students indicated by WAEC and NECO has been come a public outcry. The persistent failure of students in biology is becoming alarming and a lot of reason has been attributed to this. Manalanga & Awelani (2013) stated from there finding that lack of financial support, lack of laboratory equipment's, biology textbook is responsible for poor performance in biology. The problems of student's poor performance in biology have been carried out by many researchers. Owen et al. (2014) observed that the poor performance in biology is due to inadequate supply of teaching and learning resources, laboratories and libraries. According to Praghlapati, (2020), the measure put in place by the government to prevent the spread of this virus have a negative effect on education, businesses, health and tourism. Suede et al (2020) confirmed that during the covid-19 pandemic, the school and universities used the electronic learning to facilitate student learning. While adapting to the new changes, staff and student readiness need to be gauge and supported accordingly. Physically challenge individual have the privileges to participate in online learning in virtual environment require limited movement (Basilaia & Kvavadze, 2020). The use of suitable and relevant pedagogy for online education may depend on the expertise and exposure to information and communication technology (ICT) for both educator and the learners.

Petrie (2020) listed some online platforms as Microsoft teams, Google classroom, canvas and blackboard, which allow the teachers to create educational courses, training and skill development programme. However, et al (2022) posits that COVID-19 has affected the academic performance of students. Adnan and Anwar (2020) findings from their study indicates that online learning cannot produce desired results in underdeveloped countries, where a vast majority of students are unable to access the internet due to technical as well as monetary issues. The study is to examine the impacts of covid-19 pandemic on academic performance of Biology students in Al-Hikmah University, Ilorin, Kwara State.

Purpose of the Study

1. To examine the impacts of covid-19 lockdown on learning Biology among students in Al-Hikmah University.
2. To examine the impacts of covid-19 lockdown on the academic performance of Biology students in Al-Hikmah University.

Research Questions

1. What is the impact of covid-19 lockdown on learning Biology among students in Al-Hikmah University?
2. What is the impact of covid-19 lockdown on the academic performance of Biology students in Al-Hikmah University?

Methodology

This paper examined the Covid-19 Pandemics and its implication on academic performance of Biology Students in Al-Hikmah University, Ilorin. Two research questions guide the study. A survey method was used for this study. The population of this study consisted of 50 biology students from the total numbers of 150 biology students in Al-Hikmah University. purposive sampling technique was employed in selecting the biology students in the schools. Two instruments; a structured questionnaire and academic performance proforma (APP) was used. The questionnaire is divided into two part which are the demographic characteristics of the respondents and the second part with Likert scale response with five response anchors. The reliability of the instrument was pilot tested and it was ascertained through test-retest method within two weeks interval and the scores were correlated using Spearman correlation coefficient (r). The coefficient of correlation obtained was 0.92, and this is considered high enough to confirm its reliability.

Descriptive and inferential statistics was used to describe the data analysis. Mean and standard deviation score was used to present results of response to research question was used to test variables.

Results

Research Question 1: What is the impact of covid-19 lockdown on learning Biology among students in Al-Hikmah University?

Key: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Undecided (UD), 4 = Agree (A), 5 = Strongly Agree (SA)

S/N	Impact of covid-19 Lockdown on learning Biology	Mean	SD
1.	I received Biology learning online during covid-19	3.75	1.23
2.	I learnt Biology from WhatsApp during covid-19	3.15	1.33
3.	I learnt Biology concepts through my smart phone in covid-19 lockdown.	3.20	1.23
4.	I received Biology lessons at the comfort of my home during covid-19	3.63	1.12
5.	I have virtual interaction with my biology teachers through social media during covid-19	3.21	1.51

Source: Researcher's Field Study (2022).

Table 1 showed the impact of covid-19 lockdown on learning Biology among students in Al-Hikmah University. Results showed that students received Biology learning online during covid-19 has mean score of 3.75 and standard deviation score of 1.23, they learnt Biology from WhatsApp during covid-19 has a mean score was 3.15 and standard deviation of 1.33. Similarly, they learnt Biology concepts through smart phone in covid-19 lockdown result indicated that M= 3.20; SD= 1.23. Response shows that they received Biology lessons at the comfort of their home during covid-19 has mean score of 3.63; SD= 1.12. Result revealed that have virtual interaction with their biology teachers through social media during covid-19 has M= 3.21; SD= 1.51. The implication of the table shows that students who item 1 with 3.75 and 4 with 3.63 have higher mean scores respectively. This implies that they received Biology learning online during covid-19 and received Biology lessons at the comfort their home during covid-19

Research Question 2: What is the impact of covid-19 lockdown on the academic performance of Biology students in Al-Hikmah University?

Key: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Undecided (UD), 4 = Agree (A), 5 = Strongly Agree (SA)

S/N	Impact of covid 19 on academic performance of Biology	Mean	SD
1.	I took Biology exams during lockdown virtually.	3.42	1.10
2.	I was given Biology assignment virtually during lockdown.	3.21	1.80
3.	I did my biology tests virtually through the use of smart phone.	3.40	1.26
4.	Covid-19 lockdown did not affect the academic performance of Biology	3.21	1.11
5.	I received Biology voice note at the comfort of my home.	3.28	1.34

Source: Researcher's Field Study (2022).

Table 2 showed the impact of covid-19 lockdown on the academic performance of Biology students in Al-Hikmah University. Outcomes showed that students took Biology exams during lockdown virtually has mean score of 3.4210 and standard deviation score of 1.1032, they were given Biology assignment virtually during lockdown has a mean score was 3.2071 and standard deviation of 1.8015. In the same vein, they did their biology tests virtually through the use of cell phone result indicated that M= 3.4025; SD= 1.2580. Response shows that the covid-19 lockdown did not affect their academic performance of Biology has mean score of 3.2130; SD= 1.1142. Result revealed that those who received Biology voice note at the comfort of their home has M= 3.2817; SD= 1.3423. The table shows that students who item 1 with M= 3.4210 and item 3 with 3.4025 have higher mean scores respectively. This implies that students took their biology exams during lockdown virtually and did Biology tests virtually through the use of smart phone. The implication of this result is that the used of ICT facilities has positive effect on students' academic performance during covid-19 pandemics.

Discussion

There is no significant impact of covid-19 lockdown on learning Biology among students in Al-Hikmah University. This result was supported by the response to the research question one where students strongly agreed that they received Biology learning online during covid-19 pandemic, they learnt Biology from WhatsApp during covid-19. Similarly, they learnt Biology concepts through their smart phone during covid-19 pandemic. Response also shows that they received Biology lessons at the comfort of their home during covid-19 pandemic and they have virtual interaction with their biology teachers through social media during covid-19 pandemic. This finding correlates with Nicolas et al, (2020); Esposito and Principi (2020) submission that due to covid-19 pandemic, many higher institutions closed down their activities to reduce the spread of this virus which led to higher economical, medical and social implication on both undergraduate and postgraduate communities. This result went in contrast to Niyi (2020) who found that 80 (100%) of the respondents strongly agreed that COVID-19 schools close down has led to the suspension of internal and external examinations reduction in investment on education and 80 (100%) of the respondents strongly agreed that COVID-19 schools close down has led to the suspension of teaching and learning in Schools.

There is no significant impact of covid-19 lockdown on the academic performance of Biology students in Al-Hikmah University. Outcome showed that students took Biology exams during lockdown virtually and they were given Biology assignment virtually during lockdown. In the same vein, they did their biology tests virtually through the use of smart phones. The students also agreed that covid-19 lockdown did not affect their academic performance of Biology and that received Biology voice note at the comfort of their home. This finding was supported by Suede et al (2020) who confirmed that during the covid-19 pandemic, the school and universities used the E-learning to facilitate student learning. However, this finding went contrary to Niyi (2020) result who found that 80 (100%) of the respondents strongly agreed that COVID-19 Schools close down would affect the academic programme of Senior Secondary Schools.

Conclusion

Based on the results from the research hypotheses, the study concluded that learning of Biology among students in Al-Hikmah University was negatively impacted by covid-19 pandemic. The study also concluded that the academic performance of Biology students in Al-Hikmah University was not affected by covid-19 pandemic.

Recommendations

Base on the conclusion, the study recommended that

1. The management of Al-Hikmah University should continue to adopt more educational friendly technologies and expand the ICT infrastructural facilities that will support online learning in all schools especially in Biology.
2. The school management should ensure that Head of Departments especially Biology department make the use of ICT for teaching and learning of biological concepts mandatory for teachers and learners. This would avoid learning breakup in case of any eventuality like covid-19 pandemic.

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