E-ISSN: 2710-2122, P-ISSN: 2710-2114
2021: Vol 3, No. 1, pp 37-44. https://doi.org/10.51986/ijer-2021.vol3.01.04
Interdisciplinary Journal of Education Research

Assessment of the Oyo State Teaching Service Commission Interactive Learning Platforms during COVID-19 Lockdown in Nigeria

Afeez T. Jinadu[1]
Researcher, Centre for Educational Research and Management, Nigeria
Motunrayo K. Oyaremi[2]
Consultant, Fits Helpline Educational Consult, Nigeria
Modinat D. Rufai[3]
Teacher, Oyo State Teaching Service Commission, Nigeria

CORRESPONDENCE
Afeez T. Jinadu[1]
Research Division
Centre for Educational Research and Management, Ibadan, Nigeria
Email: afeezjinadu95@gmail.com

DOI: 10.51986/ijer-2021.vol3.01.04

Abstract: *The study assessed the member response rate to the Oyo state teaching service commission (TESCOM) interactive learning platforms during the COVID-19 lockdown in Nigeria. The study adopted a descriptive survey research design. The sample comprised 3,388 respondents drawn from five online learning platforms (Arts, science, commercial, general and staffroom). Two instruments, Response Rate Factor Questionnaire-Survey monkey (r = 0.83) and participant online direct recording (π = 0.76), were used to collect data at three different intervals. Frequency counts and analysis of variance were used to analyse the data collected. Those online at the time of data collection were 59 (5.2%) for science, 23 (4.3%) for arts, 24 (6.4%) for commercial, 84 (7.4%) for general study and 96 (48.5%) in the staff room platform. A significant difference in member response rate was observed across the learning platforms [$F_{(4,10)}$ = 4.374; p= 0.027< 0.05]. Bonferroni post hoc analysis shown by mean plot revealed that general studies platform had the highest mean score (M=169.0) in terms of members response online followed by staffroom (M=79.0) and lastly commercial platform (M=32.67). It was deduced from the findings that members across the TESCOM interactive learning platforms do not respond online the same way by participating on the respective interactive platform to which they belong. Therefore, TESCOM should ensure that teachers and students actively engage in online learning platforms for better teaching and learning.*

Keywords: Assessment, Interactive, Learning, Lockdown, Platform

1. Introduction

Education is the key to achieving sustainable development of any nation. Thus, education is a right of everybody ranging from the economic, cultural and social right. The right to education epitomises the indivisibility and interdependence of all human rights (USAID, 2005). It is entrenched in several continental treaties such as the Universal Declaration of Human Rights (1948), the Convention Relating to the Status of Refugees (1951), and the Dakar World Education Forum Framework for Action (2000). Therefore, it is crucial to ensure that all citizens of any nation have access to education at all times. Access to education has been defined by Offorma (2009) as the availability, convenience, ability, and opportunity to be educated. Obanya (2003) identified five dimensions of access: economic access, physical access, sociological access, psychological access, and cultural access. However, it should be noted that all these dimensions of access apply to challenges faced by students at all levels of education. Presently in Oyo state Nigeria, children do not have physical access to schools because of the COVID-19 pandemic that has made learning very difficult.

Moreover, Education Cannot Wait (2020) reported that the ravaging COVID-19 had affected learning with about 153 billion out of school learners across 184 countries worldwide. This is about 87.6% of learners worldwide' total enrolment, which might increase the dropout rate and hinder access (National Bureau of Statistics, 2020). According to Worldometer. (2021) , approximately 1.2 billion learners were out of school and about three-quarter of the world's school population had been affected by school closures due to measures to contain the pandemic of these, about 2 million pre-primary, 25 million primary and 10 million secondary school learners across Nigeria were affected.

Cite this article (APA):
Jinadu, A. T.., Oyaremi, M. K. & Rufai, M. D. (2021). Assessment of the Oyo State Teaching Service Commission Interactive Learning Platforms during COVID_19 Lockdown in Nigeria. *Interdisciplinary Journal of Education Research, 3*(1), 37-44. https://doi.org/10.51986/ijer-2021.vol3.01.04

The resultant effects have brought a sudden drift from the usual face-to-face learning to a more blended instructional learning that integrates online and traditional classroom modalities, the so-called "new normal" (WHO, 2021). Currently, the world is being shocked by the COVID-19 (Corona Virus Disease) outbreak which reportedly originated in Wuhan, China, in the late 2019 (Lee, 2020). WHO declared this outbreak a global pandemic because the transmission of this virus was high-speed, and most countries in the world were also exposed to this virus (Omodan, 2020a). Recent data shows that the number of confirmed patients is 9,590,890 positive cases in 216 countries worldwide (WHO, 2021).

It was reported that 2,587,225 death had been recorded, with America leading with 51,694,320 cases followed by Europe with 39,744,340 cases, South-East Asia with 13,710,065, Eastern Mediterranean with 6,650,125 cases, Africa with 3, 872, 085 cases and lastly Western pacific with 1,668,791 cases (WHO, 2021). In the Africa continent, the number of index cases represents 3.44 percent of the infections worldwide. South Africa has the highest cases with 1 505, 586, followed by Morocco with 481, 709 cases and Ethiopia with 179, 407 cases (WHO, 2021). Of important note is that among the countries with a high index case in Africa is Nigeria. Confirmed 158,042 positive cases spread across 36 states, including FCT (Presidential Task Force on COVID-19/NCDC Nigeria, 2021). Earlier, the Nigeria government had temporarily closed all educational institutions, high school, colleges and universities in an attempt to contain the spread of the deadly coronavirus disease. For a long time, the closure remained in place, affecting many academic activities to include abrupt closing of secondary school and most tertiary institution academic calendar, halting of the assessment of terminal classes of high schools in the country and beyond. Among the affected examinations are the West African Senior School Certificate Examination (WASSCE), and the National Examination Council Examination (NECO). The outcome of coronavirus is that interruptions to education may have long-term implications. Therefore, there is a need to educate children even during the crisis. This is imminent because education cannot wait. It must continue through alternative learning pathways. This is to ensure that interruption to education is as limited as possible during crises and emergencies.

The United States Agency for International Development (2005) refers to the crisis as a broad range of circumstances in which children's access to education is in jeopardy. These circumstances are categorised as political, economic, health, and environmental. What we have presently fallen under health crises and, if care is not taken, can lead to other threats. To curtail this, there is a need for the state government of the federation to introduce education through other channels apart from physical schooling. In this wise, some state government, through their teaching service commissions, adopted online learning platforms. That is, technology enhanced teaching and learning avenues where interaction takes place at either the same time or whenever available at different locations over cyberspace (Emmanuel, Abdulkadir & David, 2019). The online platforms make learning accessible, interactive and fascinating when adopted. These are meant to aid the delivery of education to the students during the present pandemic, and this kind of education is referred to as education in emergencies. Examples of such learning platforms include but not limited to Skype teachings, chat rooms, zoom, WhatsApp, telegram, video conferences and webinars (Omodan, 2020b). USAID (2005) highlighted three approaches to education in emergencies; the development approach, the humanitarian approach and the human right. As an offshoot of these approaches, stakeholders must put several efforts to ensure continued enjoyment of educational rights, such as the LASUBEB of Lagos state, Nigeria.

In Oyo state, the presently available learning channels are radio, television and telegram messenger. These are meant to aid the delivery of education to the students during the present pandemic period. Schools have adopted these alternative learning platforms to ensure that schools activities continue remotely. Previous studies that investigated online learning platforms abound with their respective findings. One of such is Obiakor and Adeniran (2020), who assessed the importance of online learning in deepening education

crisis. The study highlighted the influx of users and consumers of the current fourth-generation network and the preceding third-generation popularly called 3G and 4Glte prior to the pandemic era and beyond. The study found out that the fourth-generation network helped reduce the spread of deadly diseases by reducing physical contact.

Jinadu and Balogun (2020) investigated the availability and adoption of synchronous and asynchronous online learning platforms in public and private schools during the COVID-19 lockdown in Nigeria. The study found out that WhatsApp was the most available platform and most adopted platform by respondents, while Meebo was the least available platform and was not adopted at all. The study also found a significant difference in the availability and adoption of online learning platforms by public and private schools, with private schools adopting more online learning platforms. From the forgone, it was evident that online learning proved to be very effective; however, the beneficiaries' response rates during the learning and factors responsible for such rates were not reported, which needed further investigation.

Senior secondary school students in Oyo State during the lockdown were placed on Telegram learning platforms stratified into departments to which the student belong. At the same time, they come together for general subjects like English and Mathematics on a general platform. With the arrangement, there are departmental platforms, general platforms and staffroom platform. Thus, there were science, arts, commercial, general and staffroom platforms. The teaching and learning are held on telegram, and students respond to what the teachers teach, and thus we have the response rate, which has to do with the rate at which each student features online.

1.1 Problem Statement

From literature, many researchers who have worked on education in emergencies or education in crisis concentrated on education in war zones, areas affected by HIV/AIDS, earthquakes and other natural disasters. These researchers have paid much attention to the education of vulnerable children, children in IDPs, and education of children in fragile countries, among others. However, the literature search did not reveal studies that assessed the member response rate on interactive learning platforms during COVID-19 lockdown period. Also, empirical data on how the program progresses needed to serve as an update to stakeholders of the program. On this basis, this study assessed member response rate on interactive learning platforms during COVID-19 lockdown period in Nigeria. Also, the factors responsible for the response rates and differences in response rates across the different platforms were investigated.

1.2 Research Questions

- What is the frequency of members logging in across the platforms?
- What are the reported upsurge and downsize factors affecting members logging in onto the platforms?
- Is there any significant difference in the rate of logging in across the platforms?

2. Methodology

2.1 Research Design, Population and Sampling

The study adopted a descriptive survey research design. This design was adopted because the researchers did not manipulate any variable but only studied and compared across the different interactive online learning platforms and drawn the inferences afterwards. This study's population comprised all senior secondary school students and their teachers on Oyo state teaching service commission (TESCOM) interactive telegram learning platforms. TESCOM created five accounts for learning on telegram messenger?. Total enumeration of all the registered members on the different learning platforms was adopted as the sample. This included 1144 on the science platform, 376 on the commercial platform, 533 on the arts platform, 1137 on the general platform and 198 on the staff room platform. A total sample of three thousand three hundred and eighty-eight (3,388) registered members drawn from the five learning platforms participated in the study.

2.2 Instrumentation

Two instruments were developed and validated to collect data for this study. These are Response Rate Factor Questionnaire using basic plan survey monkey and participant online direct recording.

i. The response rate factor questionnaire was developed by the researchers to measure the factors responsible for upsurge and downsize of response rate by staff members only. The instrument has three sections A, B, and C. Section A is on demographic information such as teacher gender, qualification, subject taught and years of experience. Section B is on factors responsible for the upsurge of response rate on TESCOM telegram platforms, and section C is on factors responsible for downsizing of response rate on TESCOM telegram platforms. To validate the instrument, samples of the instrument were trial tested on two of the researchers' school staff telegram platform. The data collected were analysed for internal consistency and reliability using Chronbach's Alpha which yielded 0.83. The final form of the instrument was administered through an online survey monkey.

ii. The participant online direct recording is an observation instrument developed and employed by the researchers to record members' response rate on the TESCOM platforms. The researchers registered alongside other participants on the learning platforms to observe and record information on the number of members active online at each of the recording period of data collection. The instrument has two sections A and B. Section A is on the platform's background information, such as department and number of administrators. Section B is on the response rate where the observer recorded the number of members active online at the designated period. To validate the instrument, two of the researchers rated their school's staff telegram responses. The data collected were correlated for inter-rater reliability using Scott's pie which yielded 0.76. The final form of the instrument was used to observe and record the response rate on the TESCOM telegram platform.

2.3 Data Collection Procedure and Analysis

The researchers registered along and participated in the TESCOM interactive learning platforms where observation and recording data for the study were carried out. After one-month-long membership on the platform, records of active members across the various TESCOM platforms were taken to be the first recording. This was followed after the next two weeks as the second recording, and the third recording took place after another two weeks. While the recordings were taking place, the response rate factor questionnaire' was broadcast online to the platform's staff members. The response rate factor questionnaire responses were automatically coded and organised online by the monkey survey online service for easy analysis. In all, data were collected over a period of six weeks. Frequency count and one-way analysis of variance: 1-Way ANOVA was used to analyse the data. A mean plot was used to report the direction of significant differences as post hoc.

3. Results and Analysis

The result was presented based on the piloting research questions. The questions are as follow: What is the frequency of members logging in across the platforms? What are the reported upsurge and downsize factors affecting members logging in onto the platforms? Is there any significant difference in the rate of logging in across the platforms? This is presented below.

Research Question 1: What is the frequency of members logging in across the platforms?

Table 1: *Members Logging in Across Platforms*

S/N	Departmental Platform	Registered Member	Active Members at1st Recording	Active Members at 2nd Recording	Active Members Online at 3rd Recording
1	Science	1144	59	46	118
			5.2%	4.0%	10.3%
2	Arts	533	23	54	38
			4.3%	10.1%	7.1%
3	Commercial	376	24	56	18
			6.4%	14.9%	4.8%
4	General	1137	84	186	237
			7.4%	16.4%	20.8%
5	Staffroom	198	96	28	113
			48.5%	14.1%	57.0%
6	Total	3,388	286	370	524
		100%	8.4%	10.9%	15.5%

Table 1 shows the frequency of members logging in across the platforms. The table indicated that staffroom platform 113 (57.0%) recorded the highest membership logging in ever, followed by general studies platform 237 (20.8%) and science 118 (10.3%). The commercial platform had the lowest membership logging in the third recording, 18 (4.3%) compared to their first recording, 24 (6.4%). The result on the general platform may be due to the fact that every member of other platforms is also expected to be on the general platform for general subjects. The result on the staffroom presuppose that despite the fact that schools are closed down physically because of COVID-19 pandemic, teachers are on leave, but their presence online indicated that their services are being rendered during the leave.

Research Question 2: What are the reported upsurge and downsize factors affecting members logging in onto the platforms?

Table 2: *Factors Affecting Upsurge and Downsize Response Rate*

S/N	Upsurge Factor	Frequency
1	Lockdown free period	13
		26%
2	Boredom	26
		52%
3	Love for learning	44
		88%
4	Passion for teaching	33
		66%
5	Commission directive	29
		58%
	Downsize Factor	**Frequency**
6	Power supply	41
		82%
7	Limited data access	22
		44%
8	Poor network	18
		36%
9	Phone misbehaviour	06
		12%

Table 2 shows the reported upsurge and downsize factors affecting members logging onto the platforms. The table indicated that love for learning 44 (88%) is the most reported upsurge factor affecting response rate by members followed by a passion for teaching 33 (66%), commission's directive 29 (58%), boredom 26 (52%) and lastly lockdown free period 13 (26%). Similarly, the table showed that power supply 41 (82%) is the most reported downsize factor affecting response rate by members followed by limited data access 22 (44%), poor network 18 (36%) and phone misbehaviour 6 (12%).

Research Question 3: Is there any significant difference in the rate of logging in across the platforms?

Table 3: *1-Way Analysis of Variance of Response Rate by Learning Platform*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	35765.333	4	8941.333	4.374	0.027*
Within Groups	20444.000	10	2044.400		
Total	56209.333	14			

*= significant at p<0.05

Table 3 shows that there is a significant statistical difference in members response rate based on learning platform [$F_{(4,10)}$ = 4.374; p = 0.027< 0.05]. This implies that the response rate across the five learning platforms varies irrespective of whether the same teaching service commission put it up. The response rate on one platform is not similar to another platform. To show the direction of significance and platform with the highest mean, Bonferroni post hoc analysis was performed, and the result of multiple comparisons was presented pictorially below.

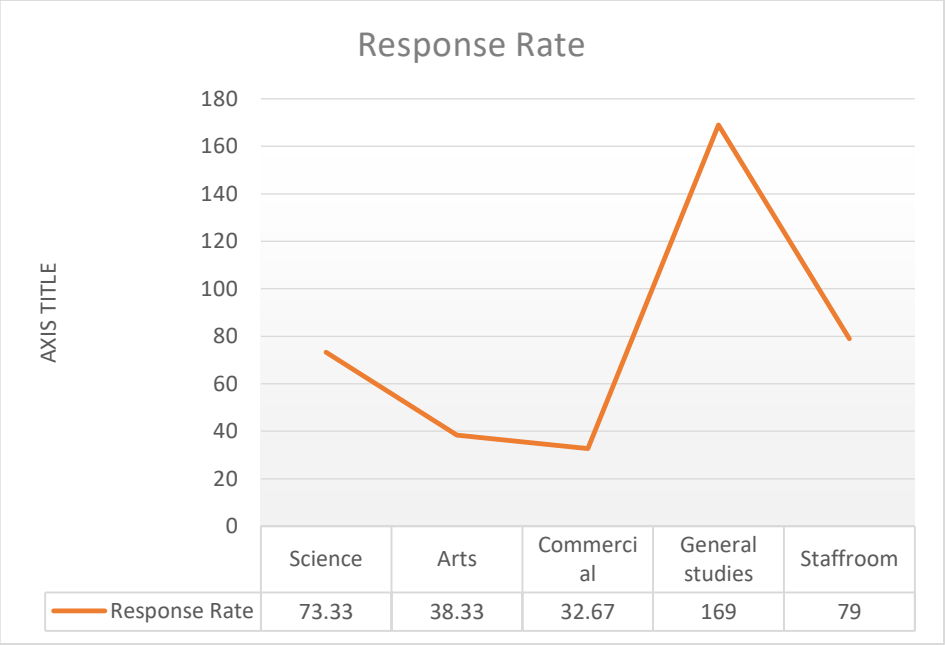

Figure 1: *Mean Plot of Member Response Rate on the Learning Platform*

Figure 1 shows the result of post hoc analysis on the multiple comparisons of the member response rate online across the learning platforms. The figure reveals that the general studies platform have the highest means score (M= 169.00) followed by the staffroom platform (M=79.00), science platform (M=73.33), arts (M=38.33) and lastly, commercial platform (M=32.67).

4. Discussion of Findings

The finding on the frequency of members logging across the platforms indicated that the staffroom platform recorded the highest membership logging in ever, followed by the general studies platform and science. The commercial platform had the lowest membership logging in the third recording compare to their first recording. The result on the general platform maybe as a result of the fact every member of other platforms are also expected to be on the general platform for general subjects while that of the staffroom presuppose that despite the fact that school are closed down physically because of Covid-19 pandemic, teachers are on leave. This finding is in tandem with that of Goldschmidt (2020), who found out that online learning has been carried out almost all over the world during the pandemic. So, in this online learning, all elements of education in all fields are required to be able to facilitate learning so that it remains active even without face-to-face contact.

The reported upsurge and downsize factors affecting members logging in onto the platforms indicated that love for learning is the most reported upsurge factor affecting response rate by members, followed by a passion for teaching, commission's directive, boredom and lastly, lockdown free period. Similarly, the result indicated that power supply is the most reported downsize factor affecting response rate by members followed by limited data access, poor network and phone misbehaviour. This result corroborates that of Jinadu and Balogun (2020), who found out that Telegram is among the most available and adopted learning platform during Covid-19 lockdown in Nigeria alongside other synchronous and asynchronous online learning platforms. This study's result is also in line with that of Zahra, Fachri & Novi (2020), who found out that online classes in the time of COVID-19 are expensive. Zahara et al. reported several things to consider for better teaching in the online classroom learning process. It was recommended that recorded videos could help with learning if the internet connection is delayed.

The finding with respect to the significant difference in members' response rate based on the learning platform revealed that the response rate across the five learning platforms varies irrespective of whether the same teaching service commission put it up. This finding is in tune with that of Baiyelo and Otunla (2014), who found out that there was a significant difference in medical teachers' utilisation pattern of ICT tools based on institutional location and gender. The result of this study also supports that of Lederman (2020), who found out that teachers make good use of technology than students by making a list of things they want to do more planned, also included the expected results so that teachers will not go wrong working from home with non-productivity for a day. If the teacher still has to work, they do not forget to pay attention to each outlet and health's cleanliness.

5. Conclusion and Recommendations

It has been established from the results that there are more registered members on the science platform than any other platform put up by the teaching service commission. More members from the staffroom stayed online than on other platforms. The lockdown period created boredom, where many users have no alternative but to join the platform to kill boredom. Power supply and limited access to data were some of the reasons given by members for downsizing in online presence. There was a significant difference in member response rates across the different TESCOM learning platforms. The general studies platform has the highest means score, followed by staffroom platform, science platform, arts, and commercial platform. Based on the above findings, the study recommended that TESCOM as a commission be advised to enforce maximum participation of both teachers and students to benefit from the various TESCOM telegram interactive platforms' opportunities. Stakeholders in the power sector should intensify effort to generate and distribute stable electrical energy to users to afford users of TESCOM telegram to enjoy uninterrupted power supply for their devices. Also, telecommunication service providers should improve their signals' quality to ease access to online learning platforms like that of TESCOM telegram.

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