



E-Learning and the Covid-19: Issues, Challenges and Observations

¹ Akeem Adebessin & ² Olayinka Olaiya

¹Department of Mechanical Engineering
The Federal Polytechnic, Ilaro Ogun State.

²Department of Computer Engineering
The Federal Polytechnic Ilaro, Ogun State.

akeem.adebesin@federalpolyilaro.edu.ng; olayinka.olaiya@federalpolyilaro.edu.ng

ABSTRACT

The outbreak of a virus induced epidemic called Covid - 19 is known to have thrown the entire globe into panic and untold hardship as it portends serious health challenge to the continuous existence of human race throughout the world. This disease was later declared by the World Health Organization as a pandemic because it has defiled all known treatments. It emanated from a village called Yuwan in China, its scourge spreads across the globe like a wild fire as it kills within some days. Schools were forced to close down, businesses suffered a major setback at initial the stage before each countries begins to lockdown their citizens to forestall further spread of the disease. This paper tends to x-ray the global impact of COVID 19 Pandemic on the education system in Ogun State vis-à-vis all attending issues, challenges and opportunities on the delivery of curriculum, teaching and learning methods, student -teacher ratio, contact hours and internet friendliness.

KEYWORDS: Classroom education, covid 19 pandemic, technology, virtual class.

1. INTRODUCTION

A healthy nation is a productive nation but when the health of a country's citizen is under threat, all sectors of that nation's economy are affected. Education is the main sector in Nigeria that drives and sustains the industrial and socio-economic lives of people. Education is a process or art of imparting knowledge, skill either formally or informally (Luiz et al, 2020). It involves teaching and learning in a structured manner but the outbreak of Covid 19 pandemic truncated the world teaching and learning processes as many schools were shut down to forestall the spread of the killer disease known as Corona Virus Pandemic 2019 which ravages across the continents (Vinay et al, 2020; Ouadoud et al, 2016). According to UNESCO, every nation is expected to allocate 25% of her resources to education sector but this policy have not been met by most African countries. According to Kamba (2009) Education remains the key to both economic and political empowerment, there is no substitute for education. Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs and habits. Educational methods include teaching, training, storytelling, discussion and directed research. Education frequently takes place under the guidance of educators, however learners can also educate themselves. The essence of online digital teaching is to provide the students with necessary contents and skills needed not just for today (Somayeh et al, 2016).

Teaching and learning is expected to continue shortly after the new year festivities breaks but the whole world was cut unaware by the outbreak of Covid 19 epidemic as no one prepared for this dreaded infectious disease. The first index case in Nigeria occurred in February in Lagos state and since then things began to get out of hands when prominent people got infected and died mysteriously (UNICEF, 2020). The upsurge in fatality rate compelled the world leaders to declare a total lockdown on their various nations hence Covid 19 epidemic became a global threat (Shahmorad et al, 2018). Contact tracing of those who have Covid 19 began in order to curtail the spread, they were quarantined and isolated for two weeks under intensive care, schools, churches, mosques and other religious worship centres were closed down, markets, malls and other social/ public gathering were banned. Worse-still, the disease reaches community spread stage and regular hand washing, sanitizing, and face cover, social distancing measures were adopted. The rise in the number of covid 19 related disease in Nigeria has significantly increased the decentralization of the treatment centres in the country especially in major towns and cities. Some studies in the area of treatment revealed that more deaths were



being recorded on daily basis just as the health workers were being infected by this deadly virus as this lead to abruptly closure of schools at levels of learning thus disrupting the academic calendar of various primary, secondary and tertiary institutions thus prompting the adoption of E-learning through various platforms such as Google Classroom, Telegram, OGUNDIGI class, WhatsApp etc (Benta et al, 2014). Classroom on television is the immediate prospect of E- learning adopted in secondary and tertiary institutions as it was considered as the next roadmap to covid- 19 pandemic (Sintema, 2020). This method of learning poses a lot of challenges and raised dust among the students, their parents and the school authority vis- a- vis the following issues. The pilot test of the online teaching program by the Ogun State Ministry of Education revealed the following problems and prospects:

1.1 Internet Connectivity

This is the most challenging among the issues as it relates to fluctuation in service delivery by the internet providers. The teeming students could not get the lectures right at their end due to signal error, poor phone visibility, and network failure or outright network time out. All these could be adduced to network provider's receivers/ antenna proximity in each student's place of abode hence internet connection may be unfriendly to its user.

1.2 Internet Subscription Cost

This refers to the cost of subscribing to gigabytes or megabytes of data for internet access bearing in mind that it increases the marginal propensity to consume of each family, it raises the cost of living as parents are subjected to constant recharge of their children's phone on regular basis so as to attend classes amid Covid 19 pandemic lockdown.

1.3 Virtual Class

This covid-19 pandemic equally eliminated physical student- teacher classroom contact, thus making it difficult for some students to comprehend the concept because they are not conversant with the use of the online mode of receiving lectures.

1.4 Students Attendance

The adoption of E- learning poses a problem in terms of students' attendance and commitment to serious learning, most students are not serious with the online teaching, some will come online to mark attendance and leave the platform. This act discourages the teacher and spell doom for the assessment of the student level of comprehension and assimilation.

1.5 Unavailability of Android phone

Online class is internet based, it requires the acquisition of android based phone so as download any of the application. A large number of students do not have access to internet phones and as a result, they are unable to partake in the scheduled online teaching.

1.6 Electricity Supply

The erratic power supply is a major constraint as most students are cut off from the online class due to flat battery while those students in the rural areas are not privileged to join because of the remoteness of their location and absence of basic infrastructural amenities like electricity, good road network, poor internet facility and lack of technical knowhow on the use of computer.

1.7 Practical Coverage

Education requires a blend of formal, informal, technical and theoretical knowledge which must be effectively harmonized and harnessed to solve societal problems but online teaching could not provide hands on practical for the students and as such the practical content of the syllabus were lacking hence absence of practical exposure and real-life experience poses a big problem.



1.8 Discipline

Discipline is an important aspect of teaching as it depicts molding student to be academically sound, upright, dedicated to studies and morally groomed but online or virtual teaching erodes the culture of character building and tutoring of secondary school students participating in the program and as such students are prone to watching pornographic videos while teaching is on- going because of distance and lack of discipline (Arkorful & Abaidoo, 2014).

1.9 Inadequate Online Teachers

The outbreak of Covid 19 pandemic was sudden and it caught everybody unaware in all facets of human endeavor hence inadequacy in the number of teachers with digital teaching skills was a problem at initial stage of classroom on television program

1.9.1 Cost of Providing SmartUp App

The adoption of E learning requires the development of an android based Application by the Ogun State Ministry of Education for this special purpose so that secondary school students will be able to download the App and get linked up. This development is an additional cost to both government and the student in the wake of the harsh economic crisis posed by the pandemic.

2. METHODOLOGY

The study employed an analytical and demographic assessment of the classroom on television as organized by Ogun State Government. A structured questionnaire was administered to collect data based on sex demography, department, and student's location in government and private secondary schools in Ogun State. .A total number of 8,010 public schools and 9,365 private schools were considered with students in arts, commercial and science vis-à-vis student's sex demography. The study revealed that 54% are female and 46% are male. The downloaded raw data from the google drive were analyzed accordingly.

3. RESULTS AND DISCUSSION

Figure 1 shows the demographic participation of students in the twenty (20) local governments in Ogun state. It can be deduced that 2,423 students from secondary schools within Ado- Odo Ota axis participated fully in the Ogun Digital Class during the pandemic period while only 108 students from secondary schools within Remo local government axis listened and watched the program.

Figure 2 shows the various media of teaching students during Covid-19 pandemic. The chart depicted that 11,571 secondary students watched the program via You-tube channel, 13,097 students listened to the program via radio, and 6,810 students watched the program on television while 16,707 students logged in via Ogun State Government website.

Table 1: Students' Participation in the 20 Local Government Area.

S/N	Local Government Area	Students' Participation	Participation by Percentage
-----	-----------------------	-------------------------	-----------------------------



1	Abeokuta North	1,507	9.09
2	Abeokuta South	1,926	11.63
3	Ado- Odo Ota	2,423	14.62
4	Ewekoro	242	1.46
5	Ifo	1,409	8.50
6	Ijebu East	354	2.13
7	Ijebu North	583	3.51
8	Ijebu North East	254	1.53
9	Ijebu Ode	1,580	9.53
10	Ikenne	708	4.27
11	Imeko- Afon	320	1.93
12	Ipokia	516	3.11
13	Obafemi Owode	1,455	8.78
14	Ogun Water Side	531	3.20
15	Odeda	571	3.44
16	Odogbolu	475	2.86
17	Remo North	108	0.65
18	Sagamu	817	4.93
19	Yewa North	458	2.76
20	Yewa South	329	1.98

Table 2: Students' Survey Responses.

Respondent	1	2	3	4	5	6	7	8
Strongly Agree	✓	✓	✓	–	✓	✓	✓	✓
Fairly Agree	–	–	–	✓	–	–	–	–
Disagree	–	–	–	–	–	–	–	–

Ogun State Demography

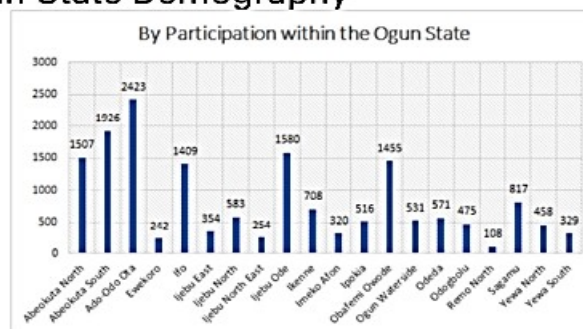


Fig. 1: Demographic Participation of Students in the 20 Local Governments

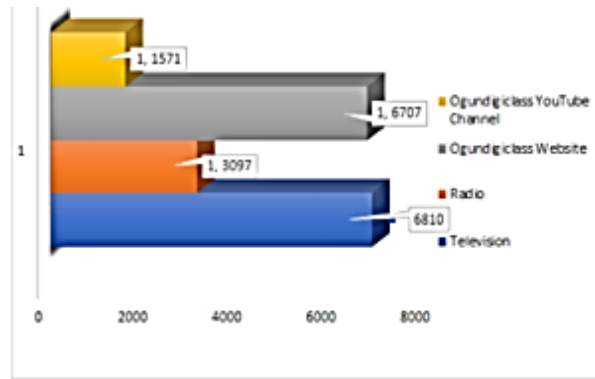


Fig. 2: Media of Teaching Students during Covid-19 Pandemic

Figure 3 reveals the number of lessons watched or listened to by students in the four zones. It is evident that 10,000 students attended between 1 to 5 subjects, 2,300 students listened and watched about 6 to 10 subjects, 2,000 students joined about 11 to 20 subject classes while 800 students listened and watched 20 subjects and above.

Number of Lessons Watched/Listened

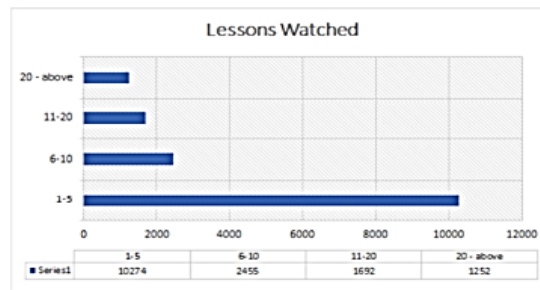


Fig. 3: Number of Lessons Watched / Listened to by students

Figure 4 depicts the category of students that watched/ listened to Online Class; the concerned students are either categorized as commercial, science or arts based on their subject combination.

By Departments

- ARTS
- COMMERCIAL
- SCIENCE

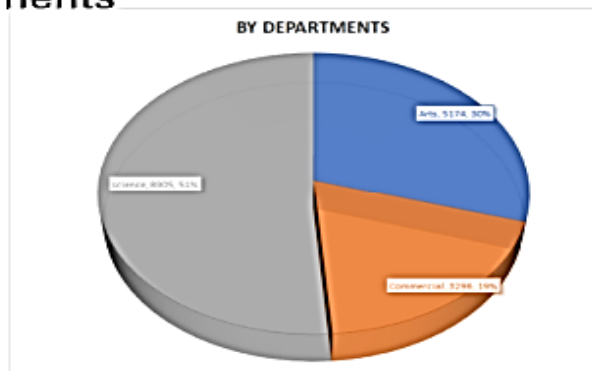


Fig. 4: Category of Students that Watched/ Listened to Online Class



Figure 5 shows the marks distribution by percentage. The performance analysis chart revealed that about 1,818 students scored 100% while 5,922 students scored marks ranging from 0-39%, an indication of mass failure in the overall student performance.

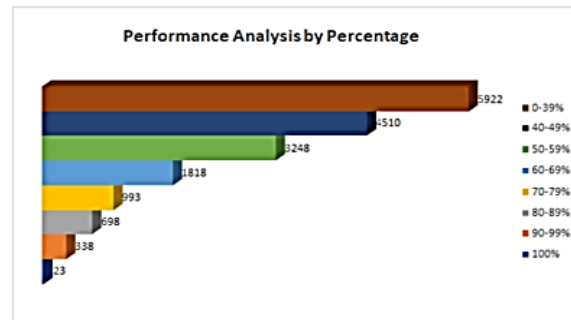


Fig. 5: Assessment/ Performance Analysis by Percentage

Figure 6 summarizes the general rating of Ogun Digital Class; it is observed that commercial students tops the 5.0 rating scale with 4.17 followed by Arts student with a grade point of 4.14 while science students emerged with a grade point of 4.04. This could be attributed to lack of practical or hands on practice to support the theoretical content of the curriculum.

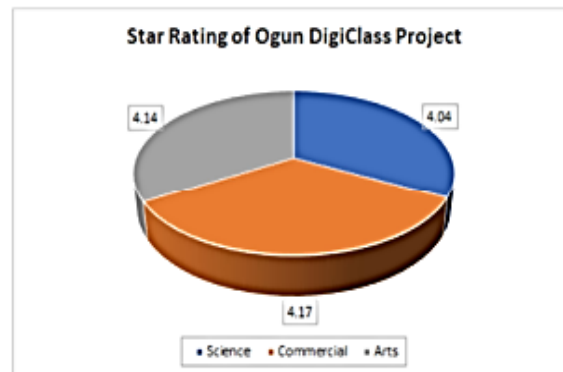


Fig. 6: General Rating of Ogun Digital Class

4. CONCLUSION

It is concluded that the outcomes of the performance evaluation or assessment test carried out at the end of the classroom on television, radio, You- tube, WhatsApp, and other social media platforms, science students emerged with a grade point of 4.04. This could be attributed to lack of practical or hands on practice to support the theoretical content of the curriculum.

REFERENCES

Arkorful, V., & Abaidoo, N. (2014) The role of e-learning, the advantages and disadvantages of its adoption in Higher Education. *International Journal of Education and Research*, 2(12).

Benta, D., Bologa, G., & Dzitaca, I. (2014), E-learning Platforms in Higher Education. Case Study, *Procedia Computer Science* 31, 1170 – 1176

Kamba, M. A. (2009) Problems, Challenges and Benefits of Implementing E-learning in Nigerian Universities: An Empirical Study, *International Journal of Emerging Technology in Learning (iJET)*, 4(1), 66-69



NSE Ilaro Branch, 1st National Conference, Ilaro, 2-3 November, 2020.

- Liu, Z., Lomovtseva, N., & Korobeynikova, E. (2020) Online Learning Platforms: Reconstructing Modern Higher Education, *International Journal of Emerging Technology in Learning (IJET)*, 15(13), 1-9
- Ouadoud, M., Chkouri, M. Y., & Nejjari, A. (2016) Studying and Comparing the Free E-learning Platforms, *ICTE: Information and Communication Technology for Education*, 581 -586
- Shahmorad, L., Changizi, V., Mehraeen, E., Bashiri, A., Jannat, B., & Hosseini, M. (2018), The challenges of E-learning system: Higher educational institutions perspective. *Journal of Education and Health Promotion*,
- Sintema, E. J. (2020) Effect of COVID-19 on the performance of Grade 12 students: Implications for STEM education'' *EURASIA J Math Sci Tech Ed*, 16(7), 1–6.
- Somayeh, M., Dehghani, M., Mozaffari, F., Ghasemnegad, S. M., Hakimi, H., & Samaneh, B. (2016) The effectiveness of E- learning in learning: A review of the literature, *International Journal of Medical Research & Health Sciences*, 5(2), 86-91
- UNICEF NIGERIA (2020). Nigeria Education in Emergencies Working Group; Nigeria Education Sector COVID-19 Response Strategy in North East. Available online:<https://covid19.ncdc.gov.ng> (accessed on 28 July, 2020).
- Vinay, K, Sowmya, T. S., & Tangod, V. B. (2020) Effect of Lockdown on Higher Education in the Wake of COVID-19 Epidemic: A Scientific Survey, *International Journal of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS)*, 9(10), 30-35