**Perception and Experience of Nigerian Private University Undergraduates on Virtual Learning during COVID-19 Lockdown**

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*Abstract*—*As a measure to contain the rapid spread of COVID-19 pandemic, governments globally enforced lockdowns with several sectors such as the educational sector being affected as academic institutions remained shut during the period. This consequently prompted Landmark University, a private institution in North Central Nigeria as well as several other schools to adopt the virtual learning methods. A self-administered, structured questionnaire with a modified Likert scales pattern was administered to 400 undergraduate students of Landmark University who participated in the virtual classes during the lockdown period, out of which a total of 335 responses were obtained. With the primary objective being to assess the effects of environmental factors on the learning experiences of students during virtual learning, the study discovered after analysis that Telegram was the most used platform and is the platform that had the most significant effect on the online learning experience of the students.*

Keywords— Nigeria, Perception, Experience, Virtual Learning, COVID-19 Lockdown

# Introduction

The level of disruptions occasioned by the COVID-19 pandemic lockdowns globally cannot be accurately quantified as many sectors and societies across nations of the world stopped functioning. Aside the obvious economic effects of this pandemic, massive socio-cultural impacts exist due to the lockdown measures adopted by governments worldwide to curb the sporadic spread of the virus [1]. Prior to February 28, 2020 Nigeria erroneously presumed itself safe from the Coronavirus disease as the country had no confirmed or registered cases. The situation however changed with the first confirmed Covid-19 case of the Italian patient, who was diagnosed with the disease upon his return to Nigeria on February 25, 2020 after visiting Milan and within weeks, several others got infected [2].

In the height of the rapid and continuous spread of the coronavirus, governments across the globe enforced lockdown measures leading to the closure of educational institutions in a dimension never witnessed before in contemporary human history. Nigeria was not left out of this as most state governments promptly declared the closure of educational institutions in early March 2020 and a total lockdown of the country was enforced by the President on March 29, 2020 [2]. Consequently, Landmark University promptly closed its doors on March 21st 2020, allowing all its students to exit its premises. The closure of educational institutions and the need for academic continuity however prompted the search for and the use of innovative digital interventions and alternatives to learning [3]. In Nigeria, some tertiary institutions including Landmark University adopted virtual teaching platforms to reach out to their students during this period as an alternative to the conventional face-to-face classroom interactions undergraduate students are used to [4].

This however wasn’t a smooth transition for Nigerian public universities since the country ranked low in institutional e-learning readiness when compared with others globally due partly to the inadequacy of infrastructures and dearth of ICT facilities [4]. Most Nigerian private universities however proved themselves ready for this paradigm shift by swiftly engaging several virtual teaching modes such as Blackboard, Microsoft Teams, Skype, Zoom, Telegram, and other online platforms [1] and [5]. In Landmark University, virtual classes took place as Lecturers engaged the students all through the period of the lockdown. This study therefore attempts to fill a gap in existing literature where student/lecturer experiences on virtual learning methods have been investigated but without a corresponding student perception assessment done. In view of the above, this study rather concerns itself on the perception and experience of undergraduate students of Nigerian private universities for the obvious reason that they, unlike their public university counterparts, mostly participated in the switch from physical to virtual learning. Students of Landmark University, a private tertiary institution in Nigeria were chosen as the sample for this study. Landmark University was among the very first universities that embraced virtual learning immediately educational institutions were shut down in the height of the rapid spread of coronavirus in the country.

# RESEARCH OBJECTIVE

The primary objective of this study which is to probe into the perception and experience of undergraduate students in Nigerian Private Universities to virtual learning as an alternative to the conventional face-to-face (physical) teaching methods during the pandemic. Their response to virtual learning, proficiency in the use of ICT, access to facilities that allow for virtual learning, and other relevant environmental factors is also evaluated in this study.

The result of this study is important to appropriately situate need or otherwise of the modification of learning experience of students so as to combine both the conventional face-to-face classroom interactions and virtual teaching by educational institutions as new approach going forward. This will help government and all other stakeholders in the educational sector to be adequately prepared to move most of the lecture content to e-learning modes and also adjust the course structure and curriculum appropriately when the need arises.

# brief literature review

The impromptu switch of the modes of teaching and learning from the conventional face-to-face classroom interactions to virtual teaching during the Covid-induced lockdowns was not just immediate but was mostly unprepared for especially in Nigeria. Despite the availability of several platforms made available by prevailing technological advancements, the need to ascertain the preferences, responses, perception and experience of students who are the recipients of this learning process has become very crucial.

Several scholarly works exist to explain the inextricable link of students’ preferences, perception, readiness, responses and experience when the switch from face-to-face teaching to a virtual one occurs. [6] originally investigated the readiness of Australian students for online learning in the country’s vocational education and training sector. In this article, “readiness for online learning was categorized into three variants; (a) the preference of students for alternative delivery methods as against the conventional face-to-face classroom instruction; (b) students’ acceptance of electronic communication methods of learning; and (c) the evident ability of students to participate in self-instructed learning.

In addition, [7] and [8] in their separate studies attempted to operationalize the concept of readiness for online learning, while [9], [10], [11] and [12] all investigated the factors that influenced the readiness for online learning by students. This is premised on the basis that the effectiveness of online learning is predicated on the understanding of the perception of the end users, i.e. the students. [13] investigated the efficiency of the online teaching and learning as compared to the conventional physical classroom interactions in tertiary institutions while also advocating for a “blended” approach; [14] opined that the provision of institutional support as necessary for effective online learning.

Furthermore, while [15] discovered both the favourable and unfavourable perceptions by students on online learning, [16] investigated the extent of instructional emphasis on learning through interaction, [17] and [18] probed into the flexibility of the online learning process. In addition, some studies exist that considered the competencies required to use the online learning technology [19]; [20] and [21], while [22] identified the perceived strengths of online learning as against the conventional face-to-face interactions.

Some studies have however identified the absence of a sense of community and/or feelings of isolation by learners, delay in responses, problems related to the instructors, lack of discipline by learners, time management issues, technical challenges, high rate of student attrition, etc as the noticeable weaknesses of the online learning process [23], [24], [25], [26], [27], and [28].

# METHODOLOGY

## Scope

This study is limited in scope to the current undergraduate students of Landmark University who participated in the online teaching program during the lockdown.

## Technique

Relying on primary data source, the study used Landmark University undergraduate students as a Case Study. Via the distribution of structured questionnaires to undergraduate students of Landmark University who participated in the virtual classes during the lockdown period, a total of 335 responses were obtained across the university’s various Departments and Colleges. Their responses were thereafter analyzed using SPSS with a view to assessing their experiences during the virtual learning as well as the environmental factors that affected their learning experience.

## Participants

A total of 335 students from Landmark University (Male = 180; Female = 155) participated in this study. The study involves students in different academic levels (200 level =119; 300level = 104; 400level = 80; 500level = 32). The age average (below 15 years = 14; 15–20years = 197; 21 and above = 124). The students belong to different academic disciplines (Pure and Applied Sciences = 40; Business & Social Sciences = 146; Agricultural Sciences = 70; Engineering = 79).

Figure 1 below shows the geo-political zone of residence of the participants during the lockdown, North-East = 24; North West = 27; North-Central = 69; South-East = 41; South West = 121; South-South = 53

1. geo-political zone of residence of the participants

##### Analysis and discussion

The major objective of the study is to assess the perception and experience of undergraduate students of Nigerian private universities to the shift from the conventional face-to-face learning to virtual learning prompted by the COVID-19 pandemic lockdown. To achieve this, participants were asked if they participated in the virtual learning organized by their university. Out of the 335 participants, 331, constituting about 98.8% of the participants engaged in virtual learning.

1. Percentage of participants that engaged in virtual learning

The figure 2 above shows that 331participants constituting about 98.8% of the participants engaged in virtual learning during the lockdown period.

|  |  |  |
| --- | --- | --- |
| **Gender** | **Frequency** | **Percentage** |
| Male | 180 | 53.73 |
| Female | 155 | 46.27 |
| **Total** | **335** | **100.00** |
| **Age range** | **Frequency** | **Percentage** |
| Below 15 | 14 | 4.20 |
| 15-20 | 197 | 58.80 |
| 21 & above | 124 | 37.00 |
| **Total** | **335** | **100.00** |
| **Academic Level** | **Frequency** | **Percentage** |
| 200level | 119 | 35.52 |
| 300level | 104 | 31.04 |
| 400level | 80 | 23.88 |
| 500level | 32 | 9.55 |
| **Total** | **335** | **100.00** |
| **Academic Discipline** | **No of Students** | **Percentage** |
| Pure & Applied Sciences | 40 | 11.94 |
| Business & Social Sciences | 146 | 43.58 |
| Agricultural Sciences | 70 | 20.90 |
| Engineering | 79 | 23.58 |
| **Total** | **335** | **100.00** |
| **Location during lockdown** | **No of Students** | **Percentage** |
| North-East | 24 | 7.20 |
| North West | 27 | 8.10 |
| North-Central | 69 | 20.60 |
| South-East | 41 | 12.20 |
| South West | 121 | 36.10 |
| South-South | 53 | 15.80 |
| **Total** | **335** | **100.00** |

*Research Question:*

*RQ*: To what extent do environmental factors affect the perception and experience of undergraduates of Nigerian private universities to virtual learning during the lockdown?

*Objective*: To determine the effect of environmental factors on the perception and experience of undergraduates of Nigerian private universities to virtual learning during the lockdown

To unravel the above objective, the participants were asked questions as regards certain environmental factors that could have impacted their virtual learning experience.

These environmental factors included the following;

*Devices*: The type and suitability of devices used

*Network*: Access to Data, Internet Connectivity and Bandwidth Availability

*Platform*: Online Interactive Platforms used

*Power Supply*: The type of Power Supply and its availability for Online Learning

*Lecturers*: Availability of Lecturers and their Teaching Style

Analysis of their responses were diverse. On the question of if they participated in the online learning, analysis shows that about 98.8% of the respondents participated.

*Did you participate in the online learning program of your institution during the COVID-19 lockdown?*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Yes | 331 | 98.8 | 98.8 | 98.8 |
| No | 4 | 1.2 | 1.2 | 100.0 |
| Total | 335 | 100.0 | 100.0 |  |

On the question of the type of device used, majority of the respondents (40.3%) used laptops while the use of android phones came second as seen in the table below

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | i phone | 46 | 13.7 | 13.7 | 13.7 |
| android | 118 | 35.2 | 35.2 | 49.0 |
| Laptop | 135 | 40.3 | 40.3 | 89.3 |
| 3.00 | 36 | 10.7 | 10.7 | 100.0 |
| Total | 335 | 100.0 | 100.0 |  |

On the question on to what extent the type of device influences the online learning experience of the respondents, it was discovered that over 70% of the respondents agreed that the type of device used by them significantly influenced their online learning experience as shown in the table and graph below.

To what extend did your type of device influence your online learning experience?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **To what extend did your type of device influence your online learning experience?** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Very significant | 72 | 21.5 | 21.5 | 21.5 |
| Significant | 166 | 49.6 | 49.6 | 71.0 |
| Less significant | 62 | 18.5 | 18.5 | 89.6 |
| Not significant | 25 | 7.5 | 7.5 | 97.0 |
| I am not sure | 10 | 3.0 | 3.0 | 100.0 |
| Total | 335 | 100.0 | 100.0 |  |

On the question of what type of data connection was used, majority of the respondents opined that 4G/LTE was predominantly used. This suggests the unreliability of 3G and WiFi in most areas.

What type of data connection access was available to you for the online learning process?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **What type of data connection access was available to you for the online learning process?** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 3G | 73 | 21.8 | 21.8 | 21.8 |
| 4G/LTE | 160 | 47.8 | 47.8 | 69.6 |
| Wifi | 77 | 23.0 | 23.0 | 92.5 |
| I am not sure | 25 | 7.5 | 7.5 | 100.0 |
| Total | 335 | 100.0 | 100.0 |  |

On the question of how much internet connection influenced the experience of respondents in online learning, about 75% of the respondents asserted that this factor greatly and significantly influenced their experiences.

To what extent did your internet connection influence your online learning experience?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **To what extent did your internet connection influence your online learning experience?** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | very significant | 106 | 31.6 | 31.6 | 31.6 |
| significant | 145 | 43.3 | 43.3 | 74.9 |
| less significant | 50 | 14.9 | 14.9 | 89.9 |
| not significant | 24 | 7.2 | 7.2 | 97.0 |
| I am not sure | 10 | 3.0 | 3.0 | 100.0 |
| Total | 335 | 100.0 | 100.0 |  |

On the question of which of the several online platforms was predominantly used by students during the online learning period, 90% of the respondents chose Telegram.

Which of these online platforms was used by your institution for online learning during the lockdown?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Which of these online platforms was used by your institution for online learning during the lockdown?** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Telegram | 303 | 90.4 | 90.4 | 90.4 |
| Zoom | 30 | 9.0 | 9.0 | 99.4 |
| Google Hangout | 1 | .3 | .3 | 99.7 |
| 5.00 | 1 | .3 | .3 | 100.0 |
| Total | 335 | 100.0 | 100.0 |  |

On the question of the extent to which Power supply influenced the online learning experience, about 70% of the respondents opined that power supply was highly necessary and played a major role.

To what extent did your power supply influence your online learning experience?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **To what extent did your power supply influence your online learning experience?** | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent | |
| Valid | very significant | 107 | 31.9 | 31.9 | 31.9 | |
| significant | 127 | 37.9 | 37.9 | 69.9 | |
| less significant | 73 | 21.8 | 21.8 | 91.6 | |
| not significant | 20 | 6.0 | 6.0 | 97.6 | |
| i am not sure | 8 | 2.4 | 2.4 | 100.0 | |
| Total | 335 | 100.0 | 100.0 |  | |

##### findings

The discussion derived from the results above shows that the environmental factors i.e. power supply, internet connectivity, type of device being used and the platform of choice all have significant role on their online learning experience. Out of all the environmental factors analyzed, the choice of platform used had the most significant effect on the students’ online learning experience. The platform predominantly used being Telegram.

This result might be due to some extraneous factors such as the preference of the institution (Landmark University), the preference of most of the Lecturers who taught online courses during the lockdown, the low data consumption of the platform, the preference of the platform by the students due mostly to the ease of use of the platform and the unlimited number of participants that it can contain.

##### POLICY IMPLICATIONS

In view of the above, it has become imperative that the views of respondents as analyzed in this research suggest that Nigeria might need to consider the various needs of online users to make virtual learning more effective, efficient and most importantly, more participatory.

We cannot overemphasize the fact that the failure of the Nigerian education system led to the proliferation of private tertiary institutions in the country. As such, it would show ineptitude on the part of the government should private tertiary institutions utilize virtual learning and a more advanced ICT structure than government institutions. While ICT has revolutionized many sectors, from business, medicine, agriculture, hospitality, transport, etc., by churning out constant innovative products and services on a global scale, it is noteworthy that advanced nations leading the pack in these sectors have applied the disruptive technology in their education system while the less developed world is yet to fully inculcate the use of ICT and virtual learning in their respective curriculum [29]. Contemporary advancements in information and communication technology have created an enabling environ for e-learning. Gadgets in the 21st century, coupled with the ubiquitous globalization of the internet (world wide web) have facilitated unprecedented access to learning materials and resources [29].

To address the continuous growth of admission seekers who are eventually turned down by government established tertiary institutions, a holistic paradigm shift is imperative by Nigerian policy makers geared towards a quick-paced adaptation of a more flexible and encompassing education system. A population of over 200 million, a literacy rate of 72 percent and a youth population of about 60 percent, Nigeria has some 153 universities, with 40 of them being federal universities, 44 state universities, and 69 private universities. Yet according to the Joint Admission Matriculation Board, total acceptance rate is just 10 percent [30].

While the concept of virtual education is not new, it became more profound in the aftermath of the global lockdown that an alternate system to the traditional face-to-face lectures is required by the Nigerian state to ameliorate the challenge of distance learning in remote locations, tertiary institution shutdown caused by insecurity in some states, and any unprecedented emergency. A critical appraisal of universities who had to town down candidates due to insufficient physical infrastructure shows that this challenge can be avoided via virtual education, thus depleting, if not eradicating the social menace caused by such youths in the country [31]

With an average 7 percent spent of national budget spent on the education sector between 2016 – 2018 [30], it is impossible to comprehend how Nigerian tertiary institutions will be well-funded to develop adequate infrastructure for both physical and virtual learning. This crucial part of government policy needs to be readdressed. Also, salient to successful virtual learning is ICT literacy. As such, adequate provision should be made for the training of both operators and students on the use of technologies, applications and software vital to virtual learning [32]. Finally, private and non-governmental establishments should be encouraged to contribute to virtual learning development. Taxes can be waived in return to physical, material and financial contributions to funding virtual education in Nigeria.

##### FURTHER RECOMMENDATION

Based on this study, the following recommendations are made for further studies:

The research does not contain adequate data on a comparative analysis of the perception on virtual learning among undergraduates between a state-owned tertiary institution and a privately established tertiary institution. This will succinctly detail if any dichotomy of views exists among such students.

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