Perceived Behavioural and Cost Consequences of Conducting Online Classes in the Post-COVID-19 Era for Undergraduates in Public Universities in North Central Nigeria

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Abstract

This paper examined the behavioural and cost consequences of conducting online classes in the post-COVID-19 era for undergraduates in public universities in North Central Nigeria. The study employed the survey research design. The sample of the study was made up of 360 lecturers from five public universities in North Central Nigeria. Simple random sampling was used to obtain the 5 universities while accidental sampling procedure was used to obtain the 360 respondents. The instrument used to collect data was designed by the researcher. The instrument was a five-point response type. The instrument was validated and a reliability coefficient of r= 0.79 was obtained. The findings of the study included that online classes were perceived to be inadequate for promoting effective instructional behaviours required for promoting learning at the undergraduate level in public universities in Nigeria. Based on the findings, it was recommended, among others, that educational planners should develop a hybrid learning platform that should integrate online and physical classes in post-COVID-19 era for the use of educators at the undergraduate level in public universities in Nigeria.
 Keywords: COVID-19, online, lectures, behaviours, undergraduates

Introduction

Either formally or informally, the use of online learning (Information and Communication Technology) to support teaching and learning in many schools in Nigeria is agelong even though it had minimal emphasis, attention and recognition before the outbreak of COVID-19. The outbreak of COVID-19 made the campaign and clamour for online classes (the use of ICT) to be louder and gained more ascendancy. The use of online classes became the "new normal" (Gautam, 2020) as many educationists started deploying online learning tools. This was because of the need to ensure that teaching and learning continued (Oladunjoye, 2020) in spite of the ravenous effects of coronavirus disease on people and also on the global economy.

COVID-19 refers to a mild to severe respiratory illness that is caused by a coronavirus (severe acute respiratory syndrome), coronavirus 2 of the Genus Beta coronavirus (Merriam-Webster Dictionary, n.d). According to this dictionary, the virus is transmitted chiefly by contact with infectious materials (such as respiratory droplets)

or with objects or surfaces contaminated by the causative virus. The first case of COVID-19 was recorded in Nigeria on 27 February, 2020 (Nigeria Centre for Disease Control (NCDC), 2020; Amzat & Danjibo, 2020) and since then the COVID-19 curve in Nigeria and other nations of the world is yet to be flattened.

Initially, the Nigerian government, like every other nation of the world, thought that this disease was abating soon and so to reduce the rate of spread gave an order for a total or partial "lock down" on almost all public activities from March 30, 2020. This was not unexpected as the infection rates were rapid (Aromolaran et al., 2020). The government directives on the lockdown according to Aromolaran et al. (2020) and Oladunjoye (2020) included: imposition of curfew, closure of schools at all levels, suspension of all religious gatherings and meetings, closure of international and domestic airports, limitation of any form of gathering including burials, birthday parties and weddings to a maximum of 20 persons, reduction of market days, reduction in public transportation carrying capacity to a maximum of seventy percent, closure of state boarders and reduction in weekly working hours in the public service. What this implied was that movements of people were restricted as the lockdown order made people to stay indoors (Ajide & Alimi, 2020).

As people were kept indoors, the consequences were that some businesses began to fold up, many in employment lost their jobs, students stayed long out of schools and the entire situation was chaotic, embarrassing and unbearable. Those whose means of livelihood depended on daily income were worst hit. Many wished and desired earnestly for this perilous time to be shortened for normalcy to return. Teachers in many private schools were not spared either as many of them stayed for some months without salaries. Some who were privileged were placed on half salaries and so enjoyed the benevolence of their employers. All these were because students were locked out of school as a measure for curbing the spread of COVID-19. In fact, there was hunger in homes of low-income Nigerians that form the bulk of the entire population of the country. Prices of food items increased due to food shortage, the income of many reduced as a result of reduction in economic activities and one of the consequences of this was low nutritional food intake (Aromolaran et al., 2020) as low-income families looked for means of survival not minding whether or not their diet was balanced.

But when it became obvious that students had stayed out of school for too long and that the ravenous effects of COVID-19 on people and the society were not abating, coupled with the fact that schools needed to generate funds to pay their teachers, private school owners resorted to conducting online classes for their students with the available technology at their disposal. This intervention was to ensure that students continued to learn at home in spite of the closure of schools (Oladunjoye, 2020). Among these interventions, as Oladunjoye noted, were teaching via various online platforms, using the traditional media, radio and TV, to disseminate educational contents, and using

home-based teaching by parents and caregivers. Some explored the use of WhatsApp by creating platforms for their students. Through this platform, recorded lessons were presented to the learners and also brief notes on subjects taught were given in the form of outline. While these initiatives were great, some gaps were identified by learners in different categories (Oladunjoye, 2020). At the nursery level of education for instance, parents bore the responsibilities of these online classes for their children. What it was at this level indirectly was the teacher teaching the parents to teach their children. The exercise was really very boring at this level for parents that had the required learning tools while pupils whose parents did not have the required tools were left behind or "locked out". This new normal was tolerated just to ensure continuity in learning while the nation was in a lockdown.

The prolonged lockdown and suffering made people to put pressure on government to ease the lockdown particularly that schools should reopen having kept children out of school for a long time (Anthony, 2021). The government realizing that COVID-19 was not going to go any day soon had to ease the lockdown and came out with a COVID-19 protocol and safety guidelines to guide the conduct of people and to curtail the spread of the disease agent. Included in the safety protocols were the use of face/nose masks when in public places, keeping of social distancing, observance of physical distancing at least one or two metres apart, regular washing of hands with soap under running water, frequent use of medically approved alcohol based hand sanitizers as well as avoiding crowds or gathering of more than fifty (50) persons, among others (NCDC, 2020). It was hoped that if these guidelines were strictly adhered to, the transmission of COVID-19 would be highly slowed down. A follow up to this was the reopening of offices, worship and business centres as well as schools that were hitherto closed or shutdown with stern instructions to obey the COVID-19 safety guidelines as they carried out their daily operations.

But daily reports from the Nigeria Centre for Disease Control (NCDC) concerning the spread of COVID-19 called for serious concern. The incidence of coronavirus infection in Nigeria as Amzat and Danjibo (2020) noted, grew steadily. According to them, the country recorded an upsurge of 52% of the total cases of the transmission of the disease when the lockdown was relaxed. Accordingly, Ibrahim et al. (2020) had fear of escalation with the ease of the lockdown. In fact, for fear of escalation, some states did not open schools on January, 18, that the Federal government gave the order for reopening of schools while some adopted phase reopening (Oladunjoye, 2020). The Presidential Taskforce on COVID-19 kept warning that if the infection rates continued to be on the increase due to non-compliance with the stipulated safety guidelines, she would be left with no option than to enforce another lockdown. The implications of another lockdown on the nation's educational institutions is that schools would remain closed indefinitely or that there will be a paradigm shift from the traditional learning method of conducting physical classes to online classes.

Online classes are technology driven and they have several behavioural and cost advantages as well as disadvantages. Some of such advantages as pointed out by Coursegate (2020), Broderick (2020) and Thompson (2023) included: time flexibility, lower total costs, more comfortable learning environment, geographical flexibility and career advancements. Furthermore, online classes have the ease of content update, travel cost and time saving; it is inherently fun, no boundaries, it is also immediate, and it improves students' attendance (James, 2002; Gautam, 2020; Training 4 employment, 2021; Explore talent lms, n.d.). These advantages are commendable. But the question that comes to mind is that looking at the culture of learning at the undergraduate level in Nigeria, can these be really celebrated as advantages? Can these advantages really apply at this level of educational system? Does the learning culture of Nigerian students in the nation's public educational institutions like the public universities allow the sustainability of these advantages?

These questions or issues notwithstanding, online classes also have their demerits. Some of these demerits include: learners' frustration if using wrong technology, slow performance for sound, video, large graphs if having limited bandwidth, someone must provide web server access, control, usage and bill users, limited student assessment and feedback, no human interaction, the learner plans his/her lesson, requires self-discipline, may compromise quality and standard, difficult with some practical skills, feeling of isolation, health related concern, technology issues (internet connectivity) and teacher training in the utilization of technology to facilitate teaching (James, 2002; Gautam, 2020; Training 4 employment, 2021; Explore talent lms, n.d.).

Aside the disadvantages, it is important to examine some of the advantages again: time flexibility. What this means is that a student chooses his/her own time to study apart from moving to a physical location (Thompson, 2023). How can this apply in Nigerian public schools where a teacher or few teachers deal with students that could be more than 500 in a classroom? Again, on the issue of convenience that Thompson (2023) said students have the option of taking classes in the privacy of their homes, a close examination of many undergraduates shows that if they are left to this option, effective learning is not likely to take place. Therefore, those things that are considered as advantages may be at some levels of the nation's educational system like the post-graduate level but not likely for the undergraduate students in public universities in view of the learning culture at this level. At this level, many students are strictly monitored before they could be serious with learning. Online classes, according to Training 4 Employment (2021), can only be fabulous if one is self-disciplined to direct oneself in terms of tackling the content, and this self-discipline seemed to be lacking in many of the undergraduates in public universities in Nigeria today due probably to their relative youngness, orientation and approach to learning from secondary schools, and the wrong notion about "academic freedom" that students at this level of education have.

Public universities in Nigeria and as used in this context are universities that are established and funded by government either at the state or federal level. In Nigeria, ownership of educational institutions is between the public and private sectors (Omede, 2015). States and Federal Government established universities share similar characteristics in terms of poor infrastructural facilities, low staff (teaching and non-teaching), and high students' population. The ratio of students-teacher is very high (Pollock, 2013) in many fields, disciplines and courses. In these universities, classes are crowded and students, most times, scamper for seats (Omede, 2017). This makes adherence to some COVID-19 protocol and safety guidelines practically difficult. Even at this, virtual or online classes may still not provide a perfect alternative to the physical classes.

Physical classes, is the current traditional method through which teaching and learning are facilitated in all institutions of learning in Nigeria from the nursery classes to the universities. Physical classes require that students and teachers gather in chosen geographical location to facilitate learning. It is done in the warmth of the teacher physically relating with the learners with ample opportunities for illustrations either verbally or graphically using the black or white boards. According to Thompson (2023), in a physical classroom, instructors can split students into smaller groups; administer quizzes to gauge learner's understanding; and the problem with technical difficulties may be minimal if at all it exists. What about the provision for socializing with classmates? In fact, Emi Harry of Naina Tech cited by Oladunjoye (2020) rightly noted that even though the online classes helped some students during the COVID-19 lockdown in Nigeria, it created the gap to socialize among the students. And according to Thompson (2023), online course or digital learning environment must closely replicate traditional learning in the physical classroom as much as it is possible for it to be effective.

Physical classes have so many advantages that it should not be thought to be jettisoned too soon. It is customized to suit the learning environment and also the learning characteristics of the teeming youths that seemed to have aversion for learning. As students gather in a geographical location called school or classrooms, they learn and build on their social or affective and psychomotor skills in addition to cognitive development. The development of some other domains apart from cognitive domain could be lacking in virtual, online or cyber schools (Explore talent lms, n.d). Although it is believed by many writers that online schools have lower total costs, this assertion may not be correct if viewed with lenses of a Nigerian student. If lessons are to be delivered online to undergraduates in Nigeria, in a day, they could run five (5) different courses of not less than one hour each. Who pays for the data? What happens if the handset, to say the least of these online learning tools or gadgets, is not the one that accesses the internet? A good percentage of online technologies, both the hard and the software, according to Ajefo in Oladunjoye (2020), that are being deployed in low-income countries are imported and because of this, access to technology for online

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learning can be costly especially for the low income demography that are found largely in public schools. The cost of maintaining a stable internet access is also a challenge (Ajero in Oladunjoye, 2020). These are in addition to other technical services the student pays for to download and print some relevant learning materials, type and submit projects and assignments. What happens at the level of assessment of learning outcome? According James (2002), online classes provide limited student assessment and feedback. In physical classes, many students cheat in examinations, will it not be worse if assessments are conducted online and students are made to write examinations online from their different locations?

It is worthy of note that online classes do not seem to fit into the culture of learning for the undergraduate students in Nigeria, not to talk of students and learners in secondary, primary and nursery levels. Online classes use the internet. Internet facilities are inadequate and ineffective and also inefficient in many institutions of learning in Nigeria. It is good to note that the concept of online classes also require that students learn individually from their geographical locations. What then happens to students that live in locations where internet connectivity is poor or non-existent? In addition, online classes require the use of electricity or power source. How many Nigerian villages and communities are lighted? Where there is the supply of electricity at all, it is erratic most times (Omede & Omede, 2015; Ajide & Alimi, 2020). If Nigeria switches over to online, virtual or cyber classes, given that there are required facilities, will it really be the best option or alternative to physical classes? Will it promote effective pedagogical behaviours and good learning habits among students? Will it really suit the culture of learning in Nigeria? These questions gave rise to this study that examined the perceived behaviourral and cost consequences of conducting online classes in the post-COVID-19 era for the undergraduates in public universities in Nigeria.

Research questions
The following questions were answered in this study:
    1.   What are the perceived consequences of conducting online classes in the post-COVID-19 era on the instructional behavioural effectiveness of teachers of undergraduate courses in public universities in North Central Nigeria?
    2.   What are the perceived consequences of conducting online classes in the post-COVID-19 era on the development of good learning behaviours among undergraduates in public universities in North Central Nigeria?
    3.   What are the perceived consequences of conducting online classes in the post-COVID-19 era on the development of affective behaviours among undergraduates in public universities in North Central Nigeria?
    4.   What are the consequences of conducting online classes in the post-COVID-19 era on the development of psychomotor behavioural skills among undergraduates in public universities in North Central Nigeria?

3. What are the consequences of conducting online classes in the post-COVID-19 era on the cost of training at the undergraduate level in public universities in North Central Nigeria?

Methodology
This study employed a survey research design as it collected and analyzed data from a sample of respondents considered as the true representatives of the entire subjects. The population was made up of lecturers from five public universities in North Central Nigeria namely, University of Jos; University of Abuja; Benue State University, Makurdi; Federal University, Lafia; and Kogi State University, Anyigba. The lecturers used were those from the Faculty of Education with population of 1,265. The sample for the study was 360 lecturers as 72 were sampled from each of the five universities. Accidental sampling procedure was employed as lecturers who were found in their offices at the time of the distribution of the instrument were used.

The instrument for data collection was a questionnaire designed by the researcher. The instrument had two sections - A and B. Section A introduced the instrument to the respondents and instructed them on what they were required to do. In section B, 22 items were fielded with 11 questions on the consequences of online classes on the pedagogical behaviours of teachers, 3 items each on the development of good learning behaviours, the cost of training and the development of affective behavioural skills and 2 items on the development of psychomotor behavioural skills. The instrument was on a five-point rating scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD) with scores of 5, 4, 3, 2, and 1 respectively. The instrument was face-validated by two experts at the Department of Educational Foundations, University of Jos. The instrument was trial-tested on 50 equivalent respondents that is, lecturers in some universities other than the universities that the study targeted and a reliability index of r= 0.79 was obtained using split-half method.

The administration of the instrument was done by the researcher with the aid of some research assistants in four universities outside the university where the researcher works. The instrument was mailed to them for administration and was returned after 3 weeks. The instrument was given to respondents as the researcher or the research assistants met them in their offices. The return rate was 100 percent.
The data collected were analyzed using statistical mean and standard deviation. Since the instrument was on a five points rating scale, a mean of 3.0 and above indicated acceptance, implying that lecturers accepted that conducting online classes for the undergraduate students have negative consequences on the variable measured. A mean score of less than 3.0 indicated a rejection.

Presentation of results

Research question 1: What are the perceived consequences of conducting online classes in the post-COVID-19 era on the pedagogical behavioural effectiveness of teachers of undergraduate courses in public universities in North Central Nigeria?

Table 1: Responses to the perceived consequences of conducting online classes in the post-COVID-19 era on the pedagogical behavioural effectiveness of teachers of undergraduate classes

S/N	Description	$\bar{x}$	SD
1	Online classes are not flexible for effective lesson delivery	4.4	0.99
2	They make it difficult for the teacher to gauge the mood of the learners	4.3	0.90
3	They do not support splitting of students into smaller groups for quizzes	4.1	1.10
4	Some online platforms do not permit the use of chalk/white boards for graphical and symbolic illustrations	4.3	0.76
5	Difficult to monitor students' learning effectively	4.2	0.98
6	Do not support classroom dramatization as one method of teaching	4.3	0.81
7	Inadequate network could hinder effective instructional delivery of the lesson	4.5	0.83
8	Erratic network where available is a hindrance to effective teaching	4.2	0.93
9	Poor and low electricity voltage could also hinder effective lesson delivery	4.5	0.91
10	Technical difficulties in setting up teaching platforms as well as their effective utilization	4.5	0.66
11	Difficult/inadequate for teaching practical courses	4.3	0.92
	Grand mean	**4.33**	**0.89**

Table one provided answer to research question one. The grand mean of 4.33 is above the criterion mean of 3.0. This means that the lecturers in these five public universities perceived online classes to have negative consequences on good or effective instructional behaviours of teachers of undergraduate courses in public universities in Nigeria. Each of the items on the scale scored above the criterion mean of 3.0. The implication of this is that online classes lack flexibility for the dynamism that is required in teaching, they are difficult to gauge the mood of learners and do not support the splitting of students into smaller groups for quizzes and other classroom assignments and exercises.

Question 2: What are the perceived consequences of conducting online classes in the post-COVID-19 era on the development of good learning behaviours among undergraduates in public universities in North Central Nigeria?

Table 2: Responses to the perceived consequences of conducting online classes in the post-COVID-19 era on the development of good learning behaviours among undergraduates

S/N	Description	$\bar{x}$	SD
12	The student may give up if unable to see or hear the instructor due to poor network or technical problem	4.5	0.71
13	Some undergraduates lack self-discipline and regulations are required for online classes	4.3	0.74
14	The motivation to learn that learners receive from their mates in the physical classes will be lacking	4.2	0.79
	Grand mean	4.3	0.75

The perception of lecturers about the consequences of online classes on the development of good learning behaviours among the undergraduates in public universities in Nigeria indicated that online classes are not effective in promoting these good learning behaviours or habits. This was evident from the grand mean of 4.3 and a standard deviation of 0.75 that was above the criterion mean of 3.0. The respondents perceived that students could give up learning if they had difficulty connecting to the teacher or when they could not hear the teacher well due to poor audio and/or video. Again, the students at this level were perceived not to have the discipline that online classes require for self-directed learning to take place effectively.

Question 3: What are the perceived consequences of conducting online classes in the post-COVID-19 era on the development of affective behaviours among undergraduates in public universities in North Central Nigeria?

Table 3: Responses to the perceived consequences of conducting online classes in the post-COVID-19 era on the development of affective behaviours among undergraduates

S/N	Description	$\bar{x}$	SD
15	Online classes are lacking in community and team work	3.8	1.10
16	They have little or no room for social interaction that is important for learning	4.2	0.87
17	Difficult to identify, correct or punish wrong behaviour of students	4.2	0.91
	Grand Mean	4.06	0.96

Table 3 showed that the respondents perceived online classes to be inadequate in developing the affective behaviours of undergraduates in public universities in Nigeria. The Grand mean of 4.06 was greater than the criterion mean of 3.0. The results also

indicated that online class has little or no room for social interaction and teamwork that are cardinal to the development of affective behavioural skills.

Question 4: What are the consequences of conducting online classes in the post-COVID-19 era on the development of psychomotor behavioural skills among undergraduates in public universities in North Central Nigeria?

Table 4: Responses to the perceived consequences of conducting online classes on the development of psychomotor behavioural skills among undergraduates

S/N	Description	$\bar{x}$	SD
18	Online classes are difficult for teaching physical skill development courses	4.2	0.92
19	They have no room for games and exercises that are cardinal co-curricular aspect of learning	4.4	1.02
	Grand Mean	**4.3**	**0.97**

The responses of the respondents on the consequences of conducting online classes in the post-COVID-19 era on the development of psychomotor behavioural skills indicated negative outcome. The respondents perceived that online classes are difficult for teaching physical skill development courses ($\bar{x}$ = 4.2) and that it has no room for games and exercises that are vital aspects of learning ($\bar{x}$ = 4.3).

Research question 5: What are the consequences of conducting online classes in the post-COVID-19 era on the cost of training at the undergraduate level in public universities in North Central Nigeria?

Table 5: Responses to the consequences of conducting online classes in the post-COVID-19 era on the cost of training at the undergraduate level

S/N	Description	$\bar{x}$	SD
20	Online learning tools/gadgets (iPhone, iPad, Android, Laptop) are expensive to acquire	4.4	0.99
21	Data subscription is expensive	4.3	0.82
22	Power subscription is expensive	4.2	0.81
	Grand Mean	**4.3**	**0.87**

Table 5 showed the analyses of the respondents about the perceived consequences of conducting online classes in the post-COVID-19 era on the cost of training at the undergraduate level in public universities in Nigeria. The grand mean of 4.3 that is above the criterion mean of 3.0 and a standard deviation of 0.87 indicated that online classes are expensive for students to run or achieve at this level. The respondents

perceived online learning tools or gadgets ($\bar{x}$=4.4), data ($\bar{x}$= 4.3), and power subscriptions to be expensive ($\bar{x}$= 4.2).

Discussion of findings
One of the findings of this study was that online classes were perceived to have negative consequences in promoting good or effective instructional behaviours of teachers of undergraduate courses in public universities in Nigeria. The grand mean of 4.33 on table 1 was above the criterion mean of 3.0. This finding aligns with the earlier findings of James (2002), Coursegate (2020), Gautam (2020), Training 4 employment (2021) and Thompson (2023) that online class, in as much as it has advantages, also has disadvantages. In fact, James (2002) noted that for online class to be effective, when designing, developing and delivering, one would need to carefully weigh the audience and the training contents as they are the main determinants of whether or not to run online class. Online classes were perceived by the respondents to lack the flexibility to accommodate the dynamism required of a lecturer to be effective. According to Thompson (2023), the problem with many video conferencing tools is that they are strictly video conferencing tools and that they provide the ability to see and hear and the chance to be seen and heard and not much else again. The respondents perceived that with online classes, it will be difficult to gauge the mood of the learners and that online classes have little rooms for graphical and symbolic illustrations using the chalk or white board. These findings supported the earlier findings of Training 4 employment (2021) and Thompson (2023). In a physical classroom, instructors have a chalkboard or white board at their disposal to illustrate points more clearly; they can split students into smaller groups unlike online classes (Thompson, 2023). Similarly, there are certain courses, according to Training 4 employment (2021), that benefit from real, face-to-face human interaction and the company of other students to get the most from the material being studied, and this according to Training 4 employment is a weakness of an online class.

This study also found out that online classes are not effective means through which students could learn well. This finding supports the earlier views of James (2002), Gautam (2020) and Thompson (2023). They queried technology or internet connectivity problems (poor network or technical problems) associated with the use of online platforms that are capable of frustrating the development of good learning behaviours by students. Learners, according to James, can be frustrated if using wrong technology. Moreso, according to Thompson (2023), not being able to see or hear an instructor's lesson could make students to give up learning. Aside technical difficulties, students benefit more in some if not in all courses, if it involves face-to- face interaction as noted by Training 4 employment (2021) than when it is conveyed with the use of only a machine. Learning online is a solo act for the most part as learners cannot engage more actively with the teacher or other students (Explore talent lms, n.d.). Students learn a lot from one another in a group as they congregate. This team learning is one disadvantage of an online class. Team learning is lost if students are only restricted to

online classes. In addition, online classes will require self-discipline for self-directed learning (Training 4 employment, 2021). This discipline for self-directed learning seems to be lacking in some undergraduates in public universities in Nigeria. From experience as a lecturer in one of these public universities, students at the undergraduate level are monitored through taking attendance in each lecture, giving of assignments and sometimes extemporized tests, to take lectures and learning serious.

Apart from the fact that students may not be having the required discipline for self-directed learning, online classes are also expensive relatively (Ajefo cited by Oladunjoye, 2020). According to Ajefo in Oladunjoye, a good percentage of all technologies (hardware and software) that are deployed in low income continent are imported making access to online learning expensive for low income demography that subscribe to public schools. Data and power subscriptions are also expensive, inefficient and inadequate. Power supply is a requisite condition for online classes and this is inadequate (Oladunjoye, 2020) and absent in some locations in Nigeria.

Affective and psychomotor skills developments are cardinal aspects of human development that the nation's education targets to grow. Aspects of these two domains such as teamwork, character development and social learning are lacking in online classes due to what James (2002) and Training 4 employment (2021) referred to as absence of human interaction. Online classes lack human interaction, physical interaction between the teacher and the students and between the students themselves. Students help to encourage and motivate one another to learn either directly or indirectly. The teacher too could quickly change the method of instruction from a signal that he/she might receive from the learners as the lesson progresses. All these are lacking in online classes and they are vital to learning. The respondents also perceived online classes to be inadequate for supporting the development of some psychomotor skills at the undergraduate level. Online classes do not make rooms for games and exercises. This finding aligns with that of Explore talent lms (n.d.) that practical skills that require hands-on-experience are somewhat harder to pick up from online resources. In fact, online course or digital learning environment, according to Thompson (2023), must closely replicate traditional learning in the physical classroom as much as possible for it to be effective.

Conclusion
The lockdown experienced in Nigeria and other nations of the world in 2020 was occasioned by COVID-19. This led many educationists to advocate for online classes to keep students learning at home in the face of the lockdown that prolonged. Online classes became acceptable as an intervention even when it was obvious that the nation's educational institutions were not very ready for them. Although, the use of ICT to facilitate teaching and learning in the Nigerian educational system is not a new thing, it became more popular during the COVID-19 era. Before the outbreak of COVID-19,

a hybrid or a combination of the use of physical classes and online class (ICT) was what the vogue was. Resorting completely to the use of online classes excluding the physical classes was what many advocated and started doing for fear of transmission of the disease arising from physical contact. Online classes, have their advantages as well as their disadvantages. They are good but cannot be a perfect alternative to the physical classes particularly, in Nigeria where the self-discipline for regulated behaviours that are required for self-directed learning that characterizes online classes seemed to be lacking in many undergraduates in public universities. An examination of the learning culture of some undergraduates in public universities, coupled with the fact that online learning tools are expensive and that electricity is a challenge in Nigeria, resorting completely to conducting online classes in the post-COVID-19 era will be a great disadvantage to the nation's educational system that its quality is being decried.

Recommendations
Based on the findings of this study, the following recommendations are put forward:

1. Educational planners should develop a hybrid learning platform that should integrate features of online classes and physical classes for the use of educators at the undergraduate level in public universities in the post-COVID-19 era in Nigeria. For teaching and learning to be effective, a mixture of online and physical classes is better as sticking to only one will put the nation's educational system at a disadvantage. The two platforms have their inherent advantages and disadvantages to teaching and learning.

2. Government should show more commitment to funding education by providing public schools, particularly the public universities, with online learning tools. The public universities are ill-equipped currently and electricity is still a challenge in Nigeria. The use of online learning platform is a necessity even when the physical classes are in use. Therefore, government should intensify more efforts to fund her public universities as no nation can rise above the level of her education.

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