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## Undergraduate Students' Compliance and Economic Factors as Determinants of Success in E-learning Program during Covid-19 in Nigeria

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### ABSTRACT

*This study explored undergraduate students' compliance and economic factors as determinants of success in e-learning program during covid-19 in Nigeria. It reviewed the attitude of private universities towards adopting e-learning program during the COVID-19 pandemic. The study adopted a survey research approach. The study was conducted in Evangel University Okpoto. The population of 1,800 was picked from the university admission register and a sample size of 300 was drawn using the Taro Yamene sample size determining formula. Data for this study was collected from both primary and secondary sources. The study discovered that some universities have web pages and others are in the trend of creating web pages, which is usually for advertisement of the universities but not for the e-learning activities. The questionnaire designed and distributed to the respondents was a major source of primary data. Secondary data was gathered from textbooks, journals, newspapers, encyclopedias, magazines, articles, and other periodicals found in libraries and on the internet. The instrument titled "Covid-19 and E-learning Questionnaire (CELQ)" was used for data collection. Face and content validation of the instrument was carried out by one expert in test, measurement, and evaluation to ensure that the instrument was accurate for the study. Cronbach Alpha technique was used to determine the level of reliability of the instrument. In this case, the average reliability coefficient obtained was 0.84, and this was high enough to justify the use of the instrument. Data were presented on tables, percentages and frequencies. The Pearson Correlation Coefficient ( $r$ ) statistical tool was used to analyse the data. The result proved that there is a strong negative relationship between lack of compliance by students and the long lockdown in the society which caused hardship. It also proved that there is a strong negative correlation between compliance due to prolong lockdown, in favour of its alternative hypothesis. The study concluded that most private universities in the country did not invest in e-learning packages and training of staff. Students were taken unawares during the pandemic. Most of the staff and students in universities only use Internet-related e-learning sites just for the sake of finding related information for their research, which the institution libraries cannot afford to provide them with adequate and current materials. One of the recommendations made was that private universities in Nigeria should expose their students as well as their lecturers to e-learning applications through seminars, workshops, and conferences.*

**KEYWORDS:** Undergraduate Students, compliance, economic factors, success in e-learning program, covid-19 and Nigeria

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## Introduction

The outbreak and fast spread of COVID-19 in March 2020 led to the closure of schools. Efforts to revamp education due to prolong lockdown made the government enforce distant learning, also known as e-learning, in tertiary institutions across the country. It is, however, worthwhile to know that these directives did not effect much change as a result of poor infrastructure and networking. More than one billion youth are no longer physically in school after the closure of schools and universities across many jurisdictions. The disruption in education and learning may have medium and long-term consequences for educational quality, though teachers, school administrations, and local and national governments should be commended for their efforts to cope with unprecedented circumstances to the best of their abilities.

The novel coronavirus (Covid-19) pandemic broke out in Wuhan, China in December 2019 (Kandola 2020). In the early days of the crisis, most African countries, including Nigeria, focused their response on either repatriating or sending assistance to their students who were stranded in Wuhan. This response has changed, as the pandemic has since spread into African countries, including Nigeria. On February 27, 2020, Nigeria confirmed and recorded her first case of Covid-19; the index case was an Italian who had just returned to Nigeria from his home country. From the initial cases of imported transmission, Nigeria recorded community-transmission cases. This has resulted in thousands of confirmed cases of Covid-19 in the country. In a bid to curtail the spread of the virus, the initial response of the Nigerian government was the closure of all schools, including universities, beginning in March 2020. Consequently, all students, ranging from undergraduate to postgraduate, had to leave their university campuses, putting an abrupt end to academic activities and disrupting academic calendars across various institutions.

## Statement of Problem

Education has traditionally been administered via physical interactions between teachers and students in classrooms. Through technological advancement in communications and digital devices, online education has been developed with the potential to scale education, making it affordable and accessible. The emergence of internet technology has brought profound growth in the e-learning culture of tertiary institutions in many countries. Unfortunately, most Nigerian schools are yet to fully embrace and implement this.

## Objectives of the Study

This study explores the impact of Covid-19 on E-Learning programme of private universities in Nigeria. Using Evangel University as a case study, the specific objectives are:

1. To find out the effect` of student's compliance on the success of e-learning programme in private universities in Nigeria during covid-19.
2. To find out the effect of the unstable economic factors in the country on smooth operation of e- learning during covid-19.

## Research Questions

1. What is the effect of student's compliance on the success of e-learning programme in private universities in Nigeria during covid-19?
2. What is the effect of the unstable economic factors in the country on smooth operation of e- learning during covid-19?

## Hypotheses

1. Student's compliance does not affect the success of e-learning programme in private universities in Nigeria during covid-19.
2. The unstable economic factors in the country does not affect the smooth operation of e- learning during covid-19.

## Theoretical Framework

### Constructivists Theory of Learning

This study is anchored on the constructivist theory propounded by Lev Vygotsky in 1992. Learning theory describes how students receive, process, and retain knowledge during learning. Educators who embrace cognitive theory believe that the definition of learning as a change in behaviour is too narrow, and they study the learner rather than their environment—and in particular, the complexities of human memory. Constructivists see the learner as a function object (function) [native code] of knowledge. New learning is shaped by schemas that the learner brings to the learning process. Learning, according to Lev Vygotsky, is a collaborative process, and social interaction is essential for cognitive development. According to Vygotsky, students learn best when working collaboratively with those whose proficiency level is higher than their own, allowing them to complete tasks they are not yet able to do independently. Vygotsky identified these concepts as the more knowledgeable other and the Zone of Proximal Development. Constructivist classrooms are student-centered, with the teacher acting as the facilitator. Teachers in leadership schools begin the year by building high-trust relationships and dedicate time throughout the year to maintaining the social-emotional environment of their classrooms. They aim to incorporate student voice throughout their day, allowing students to take great ownership over their environment and learning. Teachers believe that everyone has genius and teach their students to acknowledge and utilise the strengths of their classmates, creating synergy. Leadership classrooms buzz with excitement, signalling purposeful student interaction.

As teachers aim to empower students, they use teaching strategies that require collaboration and higher-order thinking, acting as a guide on the side rather than a sage on the stage. Constructivism is based on the premise that we construct new ideas based on our own prior knowledge and experiences. Learning, therefore, is unique to the individual learner. Students adapt their models of understanding either by reflecting on prior theories or resolving misconceptions. Students need to have a prior base of knowledge for constructivist approaches to be effective. Students learn more when or where there is social interaction than when learning alone. The social environment contributes positively to student's cognitive development than learning alone. Distance learning, or e-learning, in this aspect affects the students' social

learning environment. This accounts for why most students develop negative attitudes towards distance learning. This theory implies that students learn quickly and understand fast when they are together rather than being in isolation. It also implies that the learning or social environment exerts an influence on learning.

## Conceptual Review

### The Concept of E-Learning

The coronavirus (COVID-19) is a pandemic disease that affects the education systems of different income-level countries (Wajdi et al., 2020). The United Nations Education, Scientific, and Cultural Organization (UNESCO) has recognised that the coronavirus pandemic outbreak has impacted the education system in the world (UNESCO, 2020b). A lot of pandemics have occurred in human history and affected human life, the education system, and economic development in the world (Editors, 2020). The World Health Organization (2020a) on March 11, 2020, officially announced that coronavirus (COVID-19) is a pandemic after it covered 114 countries in 3 months and infected more than 118,000 people in the world. The first COVID-19 case was reported by the Wuhan Municipal Health Commission on December 31, 2019, in Hubei Province, China (WHO, 2020b). The coronavirus pandemic is quickly spreading and affecting 213 territories and countries throughout the world. In the world, about 30,086,319 total cases, 21,833,645 total recovered, and 945,962 total deaths were recorded until September 17, 2020 (World meter, 2020).

According to Medical News Today (2020), researchers believe that the coronavirus is spreading exponentially and many countries are locking their citizens in their education systems and enforcing strict quarantine to control the spread of this highly contagious disease. The governments focus on fulfilling equipment, organising medical institutions and laboratory centers, identifying the virus, training health workers, and creating awareness for their people (Haleem et al., 2020). Education has been the pillar of development for every country, so education is principal to the development and growth of all countries. The education system has been affected by several challenges, ranging from changes in the education curriculum to closing down the education system due to widespread pandemic diseases (Owusu-Fordjour et al., 2015).

### The Impact of Covid-19 on Students, Teachers and Parents

In the world, most countries have temporarily closed child-cares, nurseries, primary and secondary schools, colleges, and universities to control the spread of the COVID-19 pandemic (TUAC Secretariat Briefing, 2020). COVID-19 impacts not only students but also teachers and parents across the world. UNESCO reported that over 1.5 billion students in 195 countries are out of school in the world due to school closures (UNESCO, 2020b). According to Pujari (2020), COVID-19 has an impact on the entire educational system, including examinations and evaluations, the start of a new semester or term, and the possibility of extending the school year. The COVID-19 pandemic is affecting schools, students, teachers, and parents. The COVID-19 crisis increases social inequality in schools. Students from more advantaged parents attend schools with better digital infrastructure and teachers might have higher levels of digital technology skills. Some schools can be well equipped with digital

technology and educational resources. Disadvantaged students are attending schools with lower ICT infrastructure and educational resources (Di Pietro et al., 2020).

Following COVID-19, more advantaged students are attending schools to adopt online learning. Schools in disadvantaged, rural areas lack the appropriate digital infrastructure required to deliver teaching at a remote location. Also, there is a significant difference between private and public schools in technology and educational resources. In most countries, private schools are more effective than public schools. Students do not have equal access to digital technology and educational materials. In the (Woday et al., 2020) survey, the study found during school closures the levels of anxiety, depression disorders, and stress are high among students. Distance learning is a solution to continue the education system, but it is difficult in developing countries because many parents have not themselves been to school and there is a lack of the necessary information and communication technology (ICT) infrastructure, such as computers, radio, and television, to provide distance learning. Access to computers and access to the internet is basic to successful distance teaching.

This is not guaranteed for all students in developing countries (Zhang, 2020). Also, staff and teachers should be familiar with online teaching platforms. Teachers struggle with difficulties in the area of technology and a lack of infrastructure availability. Some private schools may not pay their staff's salaries, and some schools may pay half their salaries. COVID-19 affects poor families since many students don't have access to the equipment at home. Due to the closure of physical schools and the implementation of distance education, students spend less time learning, have less stress, and lacks of learning motivation (Di Pietro et al., 2020).

### **Compliance of Private Universities towards Adopting E-Learning Program During the Covid-19 Pandemic**

About a month after the viral pneumonia cluster was recognized, just under two months after the first symptoms ever caused by the virus (Lai et al., 2020), and on March 11, 2020, the COVID-19 pandemic (WHO coronavirus disease (COVID-19) dashboard, 2020), the World Health Organization declared a Global Health Emergency of International Importance. The severity of the virus has been very catastrophic; the closing of colleges and schools was one of the effects during the COVID-19 pandemic. Almanthari et al. (2020), Kerres, (2020) and Wang et al. (2020) noted that there is also an inescapable need to use technology in education for educational purposes during the pandemic. One of the technologies used during COVID-19 is e-learning, a form of media integration for teaching that uses a consolidated platform to organise communication processes during instructional activities. Innovative networks of technology, such as Edmodo, social media, forums, Coursera, or special higher education platforms, apply computer-managed e-learning to immersive online learning.

Through the use of the e-learning system (Omar et al., 2011; Al-Rahmi et al., 2020a), students are expected to make meaningful progress in their learning activities. Two considerations are frequently used to construct e-learning in higher education, namely, manageable costs and support facilities to promote learning effects (Clark and Mayer, 2016). The purpose of the implementation of the e-learning



method in normal circumstances is to promote more flexible, usable, and efficient face-to-face learning (Al-Rahmi et al., 2020b). However, the attitude toward the adoption of the e-learning system is still limited in developed countries. The majority of Nigerian private universities have not invested in e-learning or staff training. Students were taken unawares during the pandemic. Most of the staff and students in universities only use Internet-related e-learning sites just for the sake of finding related information for their research, which the institution libraries cannot afford to provide them with adequate and current materials. Some universities have web pages, and others are in the trend of creating web pages, which is usually for advertisement of the universities but not for the e-learning activities. It is expected that the behavioural attitudes in this analysis would have a statistically significant relationship with the actual use of the e-learning system during COVID-19. Previous experiments have demonstrated that students' behaviour and attitudes are closely related to the actual use of technology, in general, the e-learning system (Teo, 2009; Ramírez-Correa et al., 2015), hence the attitude of students towards using the e-learning system during the COVID-19 pandemic.

## Method

The study adopted a survey research approach. The study was conducted in Evangel University Okpoto. The population of 1,800 was picked from the university admission register and a sample size of 300 was drawn using the Taro Yamene sample sizes determining formula. Data for this study was collected from both primary and secondary sources. The questionnaire designed and distributed to the respondents was a major source of primary data. Secondary data was gathered from textbooks, journals, newspapers, encyclopedias, magazines, articles, and other periodicals found in libraries and on the internet. The instrument titled "Covid-19 and E-learning Questionnaire (CELQ)" was used for data collection. Face and content validation of the instrument was carried out by one expert in test, measurement, and evaluation to ensure that the instrument was accurate for the study. Cronbach Alpha technique was used to determine the level of reliability of the instrument. In this case, the average reliability coefficient obtained was 0.84, and this was high enough to justify the use of the instrument. Data were presented on tables, percentages and frequencies. The Pearson Correlation Coefficient ( $r$ ) statistical tool was used to analyze the data.

## Result

### Thematic Analysis

**Table 1: Analysis of Questionnaire Administered: Compliance of Students with E- learning Packages**

Variables	No. of Questionnaire	Percentage
Zoom Application	30	10.00
Goggle Application	58	19.33
Twitters	60	20.00
Instagram	30	10.00
WhatsApp	50	16.67
You Tube	72	24.00
<b>Total</b>	<b>300</b>	<b>100</b>

**Source:** Field Survey, 2021

A total of 300 respondents from the surveyed area, representing 100% as shown in table 1 above completed and returned the questionnaire that were administered in useable form. From the data gathered, it was observed that only 10% representing 30 agreed that very few students are conversant with Zoom Applications. 58 respondents representing 19.33% confirmed of using Goggle Applications, 50 respondents, representing 16.67% used WhatsApp respectively. 72 respondents representing 24% accepted using You Tube 20% representing 60 respondents are students who use Twitters. And 20 respondents representing 10% used Instagram.

## Hypotheses Testing

### Test of Hypothesis One

Student's compliance does not affect the success of e-learning programme in private universities in Nigeria during covid-19.

**Table 2: Statistical test of Hypothesis One**

X	Y	XY	X <sup>2</sup>	Y <sup>2</sup>
5	9	45	25	81
4	56	424	16	1236
3	67	201	9	4489
2	83	166	4	6889
1	76	76	1	15876
<b>15</b>	<b>300</b>	<b>962</b>	<b>55</b>	<b>38571</b>

**Source:** Response to question 16 on the questionnaire

$$\text{Formula } r = \frac{n\sum xy - \sum x \sum y}{\sqrt{(n\sum x^2)(\sum y^2) - (\sum xy)^2}}$$

$$r = \frac{5(962) - 15 \times 300}{\sqrt{(5(55)(15)^2 - (962)^2)}}$$

$$r = \frac{5(962) - 15 \times 300}{\sqrt{(5(55)(15)^2 - (962)^2)}}$$

$$\frac{4810 - 4500}{\sqrt{(27525 - 925324)}}$$

$$\frac{-1055}{\sqrt{(50 \times 39974)}}$$

$$r = \frac{-1055}{1413.753} = 0.746$$

$$r = 0.75 \text{ or } -75\%$$

This shows a strong negative relationship between lack of compliance by students and the long lockdown in the society which caused hardship. Going by the value (-0.75%). The null hypothesis was rejected in favour of the alternative hypothesis, which states that there is a significant relationship between prolong lockdown caused

by Corona virus in the society which caused hardship. Also, this hypothesis explained inexperience by the students as one of the major factors that hinders the smooth running of E-learning in Nigeria.

### Test of Hypothesis Two

The unstable economic factors in the country does not affect the smooth operation of e-learning during covid-19.

**Table 3: Statistical test of Hypothesis Two**

X	Y	XY	X <sup>2</sup>	Y <sup>2</sup>
5	0	0	25	0
4	7	28	16	49
3	72	213	9	5041
2	112	224	4	12544
1	101	101	1	40401
<b>15</b>	<b>300</b>	<b>666</b>	<b>55</b>	<b>58035</b>

**Source:** Responses to question 8 on the questionnaire

Formula:

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)}}$$

$$\frac{n\sum xy - \sum x \sum y}{\sqrt{((5(55) - (15)^2)(n(5835 - 931^2))}}$$

$$\frac{-2535}{2620.057} = 0.97 \text{ or } 97\%$$

There is a strong negative correlation between the unstable economic factors in the country due to prolong lockdown. The researcher rejected the Ho in favour of H<sub>1</sub> which means the hard-economic conditions has really affected the smooth operation of E-learning by private universities during the lockdown. By this figure the researcher therefore rejects the null hypothesis which states that there is no significant relationship between economic hardship and the use of e-learning. There is a strong negative correlation between compliance due to prolong lockdown. in favour of its alternative hypothesis.

### Discussion

It was revealed by Nigerian students that the university lacks the fund to build adequate e-learning library domain. As such students do not partake in online seminars, online examination, and discussion with lecturers due to limited bandwidth (Eze et al., 2018). This had resulted in the repeated strikes by the Academic Staff Union of Universities in Nigeria (ASUU) in a bid to force the government to correct abnormalities and increase the annual budget for the education sector (Eze et al., 2018). Further, Chiahah et al. (2013) on the other hand investigated the e-learning facilities students have access to in public institutions, the degree at which students access the facilities and the factors that hamper students from gaining access to e-learning facilities. The outcome of the study shows that over 41% of the students can access e-learning facilities. However, what most students have access to is the



e-mail accounts and factors such as unsatisfactory electric power supply, and poor network connections hinder access to e-learning facilities (Chiaha et al., 2013; Eze et al., 2018).

## Conclusion

Some of the universities have web page and others are in the trend of creating a web page, which is usually for advertisement of the universities but not for the e-learning activities. The study concludes that most private universities in the country did not invest in e-learning packages and training of staff. Students were taken unawares during the pandemic. Most of the staff and students in universities only use Internet-related e-learning sites just for the sake of finding related information for their research, which the institution libraries cannot afford to provide them with adequate and current materials

## Recommendations

1. Private universities in Nigeria should expose their students as well as their lecturers to e-learning applications through seminars, workshops and conferences.
2. Government should provide adequate social amenities like electricity to enhance constant light on campus to run the universities WIFI on campus to give students good access to internet network.

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