

UNDERGRADUATE STUDENTS' PERCEPTION OF ONLINE LEARNING IN UNIVERSITIES IN KWARA STATE, NIGERIA

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Abstract

Online learning provides students with the opportunities to interact synchronously and/or asynchronously through the Internet with instructional content, other students, and tutors. The COVID-19 pandemic had given a fillip to online learning in Nigerian universities. Based on this background, this study examined undergraduate students' perception of online learning in universities in Kwara State, Nigeria. The study also explored the influence of institutions and gender on students' perception of online learning. A descriptive cross-sectional survey was conducted using an online questionnaire. A total of 785 undergraduates who responded to the online questionnaire served as the sample for this study. The researchers raised four research questions, with the questions answered with percentages. The analysis revealed that online platforms used for online interactive classes were WhatsApp, Zoom, Google Meet, Google Classroom, Telegram, and Moodle. Most university undergraduates had a positive perception of online learning for instruction. The undergraduate students had positive perception of their online learning self-efficacy. This study recommended using the blended learning option for post-COVID-19 epidemic instructional delivery in Nigerian universities. Government and institutional administrators should organise hands-on workshops focused on online pedagogies for lecturers in higher institutions in Nigeria. Furthermore, the study underscored the need for institutional support for improved ICT facilities and infrastructures to provide the enabling environment for blended learning.

Keywords: Blended Learning, Online Learning, Online Pedagogies, Students' Perception, Undergraduates.

1 INTRODUCTION

Technological advances in the mid-20th century, particularly in Information and Communication Technology (ICT), brought radical changes in instructional delivery in educational institutions. The traditional instructional delivery modes became obsolete and inadequate to cater to students' learning needs. The ICT tools and resources facilitated classroom instructional delivery and provided educational and instructional options beyond any geographical confine. As a result, education became accessible to more, and it also offered opportunities for limitless resources for improved and quality instruction at every level of education.

Online teaching refers to instructional delivery, teaching, and learning over the Internet. Online teaching takes place not in the traditional classroom but at a distance. Unlike the traditional face-to-face classroom teaching and learning, online teaching and learning have numerous advantages. These include the flexibility and convenience of time for teachers and students irrespective of location, profession, or vocation. Online learning first appeared in the 1980s with the Western Behavioral Sciences Institute (WBSI) in La Jolla, California, being the first institution to use computer conferencing for distance education programmes for business executives. [1] However, the University of Toronto was the first educational institution to offer a completely online course in 1984. [2] Since then, there has been an exponential expansion of online learning in conventional, blended and distance education institutions.

There are different tools and resources online to facilitate interactive and engaging instructional experiences. Students can interact with their tutors, peers, and instructional content through these tools. These tools include learning management systems (CANVAS, Google Classroom, Moodle, etc.), video conferencing tools (Google Meet, Microsoft Team, Zoom, etc.), social media for instruction (Facebook, Twitter, Blog, etc.), cloud-based classroom clickers and students' response systems (Acadly, ClassPager, Socrative, etc.). In addition, there are also several learning materials in depositories in textual, audio, video, animated and other formats, available for free or subscribed. [3, 4]

Before the 2020 COVID-19 epidemic, Nigeria had not thoughtfully integrated online learning for blended classrooms or completely online instruction like most developing nations. Before then, the Nigerian education system depended purely on face-to-face classroom teaching and learning at all levels of education. However, learning through the school system became impossible with the pandemic and

consequential lockdown. As a result, few institutions resorted to emergency remote teaching using social media (WhatsApp and Telegram) and video conferencing applications (Zoom, Google Meet, Microsoft Team, etc.) with attendant teacher-centred instruction. [5, 6] Researchers have explored faculty's and students' perception of the learning process during the 2020 COVID-19 pandemic.

Using two surveys administered on faculty members and students, researchers investigated the effectiveness, challenges, and merits of online education in Jordan. Their findings indicated that the Zoom and Microsoft Teams were common online platforms for interactive classes in Jordan. In contrast, the WhatsApp platform was common for communication with students outside the classroom. In addition, the study found that both the faculty and students opined that online learning was helpful during the pandemic but considered less effective than face-to-face learning and teaching. [7] A study in India explored Agricultural students' perception and preference towards online learning, particularly their preferences for various online classes attributes. The study adopted an online survey of the sampled students. The results revealed that most students preferred online classes to manage the curriculum during this pandemic as the flexibility and convenience make online classes an attractive option. Also, most prefer to use the smartphone for online learning. [8]

Researchers also examined first-year university students' perception of the quality of online learning during the COVID-19 pandemic using the Likert response scale questionnaire. Results indicated that most students were less interested in the online learning adopted during the second semester. Most students had no change in their perception of the amount of freedom they had, and they appeared dissatisfied with participation during the online class; however, they felt less stressed attending lectures from anywhere. In addition, the students found their workload was bearable, but they had significantly more trouble concentrating during online lessons. [9]

An individual's self-efficacy is vital in ICT integration in learning. Self-efficacy infers an individual's belief in his/her capacity to exhibit necessary behaviours to achieve or attain a specific performance or carry out a task. [10]. Undergraduate students' self-efficacy is essential to the successful use of Internet resources for online learning. Learners' self-efficacy in using ICT is an essential motivational construct regarding ICT literacy, acceptance, and use. [11]

A study explored whether students' online-learning self-efficacy is associated with their online learning satisfaction. A cross-sectional survey was conducted in Saudi Arabian universities using an online learning self-efficacy (OLSE) questionnaire and an electronic learning (e-learning) satisfaction questionnaire. The study findings indicated that most students indicated high satisfaction. Generally, the study showed that self-efficacy influenced students' satisfaction with online learning. [12] Another study assessed online learning self-efficacy during the Covid-19 pandemic among nursing students. The study used a descriptive cross-sectional online-based questionnaire administered to nursing students in India. The findings showed that nearly half of the nursing students were satisfied with the online classes; a majority had poor self-efficacy scores related to the learning domain, while only a few nursing students had overall good online learning self-efficacy. [13]

Online learning poses challenges to learners, particularly in nations where online learning had not taken deep root before the COVID-19 pandemic. Using a survey-based questionnaire, one study assessed the challenges faced by English language learners (EFL) in a university in Saudi Arabia during the COVID-19 pandemic. Findings indicated that the main challenges during COVID-19 were academic, technical, and communication. Most of the learners were not satisfied with continuing online learning after the pandemic because they felt it was inadequate for their needs. [14] Another study investigated students' online learning experience challenges during the COVID-19 pandemic in the Philippines. The researchers used a mixed-methods approach in the study. Their findings indicated that learners faced online learning challenges related to their learning environment at home, although they had the least challenges about technological literacy and competency. [15] On the challenges of online learning in India, the students perceived broadband connectivity issues in rural areas as the first major challenge for using online learning initiatives. This finding thus highlights the digital divide and lack of equity in access to the Internet. The other constraints were data limit, data cost and data speed, equally related to internet infrastructure. The students also indicated a lack of direct classroom interactions as a primary concern in online classes. [8]

This review shows that a wide range of studies have been conducted on students' perception of online learning during the COVID-19 pandemic; however, limited information is available regarding the tools, self-efficacy, and challenges of online learning among Nigerian university students during the pandemic. This study, therefore, hopes to fill this research void. Thus, the following questions were addressed in this study.

Research Purpose and Questions.

- 1 How do undergraduates perceive online learning?
- 2 What type of tools do undergraduate students use for online learning?
- 3 How do undergraduate students perceive their self-efficacy in ICT tools for online learning?
- 4 What challenges are identified by undergraduates as inhibitions against online learning?

2 METHODOLOGY

Research Design: The cross-sectional survey design **method** was administered online to the respondents through a questionnaire.

Population and Sample: The study population comprised all undergraduates in the six universities in Kwara State, Nigeria. The combined population of undergraduates in the universities was over 55,000. Since the questionnaire was administered online, only those undergraduates who filled the questionnaire delivered through Google form formed the sample. A total of 785 undergraduates served as the respondents to fill the online questionnaire items used for data collection.

Research Instrument: A researcher-designed questionnaire focused on the research objectives. After the introductory aspect to explain the study's aims, four other sections focused on different aspects of undergraduates' perception of online learning. Section A focused on the respondents' demography. Section B, with eleven items on online tools used for learning during the COVID-19 pandemic, structured a five-point Likert scale of Very Frequently, Frequently, Not Frequently, Rarely, and Not at All. With a four-point Likert scale, Section C has response modes of Strongly Agree, Agree, Disagree, and Strongly Disagree. Finally, Section D on challenges contained seven items. The Likert scale responses were Frequently, Not at All, Not Frequently, Rarely, and Very Frequently for the frequency of identified challenges. The questionnaire items were validated and later tested for reliability through physical administration on a sample of 25 undergraduates in a neighbouring state university. Cronbach Alpha analysis yielded reliability values of 0.73, 0.81 and 0.68 for sections A, B, and C of the questionnaire.

Data Collection Procedures and Ethical Consideration: The researchers interacted with the leadership of student associations in the universities. These officials assisted in sharing the link for the Google form. In addition, ethical issues were taken care of by the researchers paid attention to during the research design and data collection processes. First, the respondents voluntarily participated in the study. Second, the participants' identities and responses were kept confidential.

Data Analysis Method: The data collected were analysed using descriptive statistics of frequency, and percentages

3 RESULTS

The quantitative data analysis for this study is presented in Tables 1 to 3 with their explanations.

Demographic Details of Respondents

The research demographic variables included gender and institutions of the respondents. Most of the respondents were female, 425(54.14%) and the male respondents, 360 (45.86%). In addition, most of the respondents were from the University of Ilorin, 665 (84.71%), 115 from Al-Hikmah University, and 5 (0.64%) were from Crown Hill University. The results are shown in Table 1.

Table 1: Demography of the Respondents by Gender

<i>Gender</i>	<i>Number</i>	<i>%</i>
Female	425	54.14
Male	360	45.86
Grand Total	785	100

Table 2: Demography of the Respondents by Institution

<i>Institutions</i>	<i>Number</i>	<i>%</i>
Al Hikma University, Ilorin	115	14.65
Crown Hill University, Ilorin	5	0.64
University of Ilorin	665	84.71
Grand Total	785	100

Answering Research Questions

★ **Research Question 1:** *How do undergraduates perceive online learning?*

Table 3 shows the results related to research question 1.

<i>S/N</i>	<i>General Perception of Online Learning</i>	<i>Yes</i>	<i>%</i>	<i>No</i>	<i>%</i>		
1	Did you attend any online courses earlier in your university before now?	271	34.52	514	65.48		
2	Did your university adopt online classes in the wake of the COVID-19 pandemic?	785	100	0	0		
3	With online learning, do you have more or less time for individual study and project preparation	Less time	%	More time	%	Same time as traditional classroom learning	%
		170	21.66	450	57.33	165	21.02
4	Regarding the structure of the courses taught online, their content theory and practical components are:	Balanced theory and practicals	%	More practical tasks than theory	%	More theory than practical tasks	%
		120	15.29	125	15.92	540	68.79
5	To what extent do you think students can learn and assimilate information in the context of exclusively online learning?	Online learning is as good as in-class traditional learning	%	They learn a great deal online	%	They learn less online	%
		230	29.30	245	31.21	310	39.49
6	To what extent do you consider the online environment suitable for education and training at the university level?	It is suitable for education and training at the university level	%	It is unsuitable for education and training at the university level	%		
		625	79.62	160	20.38		

As reflected in Table 3, only 271 (34.52%) respondents had the pre-covid experience of online classes, while 514 (52.2%) did not have the experience before. Also, all respondents, 785 (100%), said that online classes started in their universities. The question whether with online learning students have more or less time for individual study and project preparation, most of the respondents, 450 (57.52%), indicated they had more time, 170 (21.66%) felt they had less time, while 165 (21.02) thought it was like the classroom instruction. Regarding theoretical and practical activities of online classes, the majority, 540 (68.79%), perceived it to be more of theory, 125 (15.92%). On the other hand, 120 (15.29%) opined balanced theory and practicals. On student learning exclusively online, 310 (39.49%) respondents felt they learnt less, 245 (31.21%) felt they learnt a great deal, while 230 (29.30%) thought it was like a traditional classroom lesson. Finally, most of the respondents, 625 (79.62%), considered online learning

suitable for university education, while 160 (20.38%) opined it was not ideal for university education and training.

★ **Research Question 2: What type of tools do undergraduate students use for online learning?**

The analyses to address this question are presented in Table 4.

Table 4: Respondents' Frequency in the Use of Online Learning Tools

S/N	Use of Online Learning Tools	Very Frequently	%	Frequently	%	Not Frequently	%	Rarely	%	Not At All	%
1	Google Classroom	185	23.57	305	38.85	180	22.93	65	8.28	50	6.37
2	Edmodo	20	2.55	100	12.74	245	31.21	80	10.19	340	43.31
3	Microsoft Team	95	12.10	95	12.10	290	36.94	125	15.92	180	22.93
4	WhatsApp	500	63.69	165	21.02	45	5.73	35	4.46	40	5.10
5	Telegram	320	40.76	235	29.94	120	15.29	65	8.28	45	5.73
6	Moodle	130	16.56	275	35.03	200	25.48	40	5.10	140	17.83
7	CANVAS	70	8.92	105	13.38	240	30.57	70	8.92	300	38.22
8	Zoom	320	40.76	265	33.76	125	15.92	55	7.01	20	2.55
9	Google Meet	145	18.47	290	36.94	165	21.02	85	10.83	100	12.74
10	Socrative	45	5.73	115	14.65	195	24.84	45	5.73	385	49.04
11	Others	70	8.92	145	18.47	215	27.39	40	5.10	315	40.13

The results in Table 4 showed that most of the respondents had their online learning experience during the COVID-19 pandemic through the WhatsApp platform (very frequently = 63.69%, and frequently = 21.02%), Zoom (very frequently = 40.76%, and frequently = 33.76%), and Telegram (very frequently = 40.76%, and frequently = 29.94%). Also, Google Classroom was used by 23.57% very frequently and frequently by 38.85%, with Google Meet used by 18.47% very frequently and frequently by 36.94% of respondents. The Moodle Learning Management System was used very frequently by 16.65% and frequently by 35.03% of respondents. However, the respondents rarely used other online learning tools like Edmodo, Microsoft Teams, Canvas LMS, and Socrative. Finally, these analyses indicated that WhatsApp, Zoom, Telegram, Google Classroom, Google Classroom, and Moodle were the frequently used tools by faculty to interact with undergraduate students during the COVID-19 pandemic in Nigerian universities.

★ **Research Question 3: How do undergraduate students perceive their self-efficacy in ICT tools for online learning?**

Table 5 shows the results on the undergraduates' perceived self-efficacy in online learning.

Table 5: Respondents' Self-Efficacy in Online Learning

S/N	Self-Efficacy in Online Learning	Strongly Agree	%	Agree	%	Disagree	%	Strongly Disagree	%
1	I feel confident and comfortable with the online learning system	280	35.67	370	47.13	95	12.10	40	5.10
2	I feel confident while using the online learning tools	290	36.94	340	43.31	115	14.65	40	5.10
3	I feel confident while using online-learning content for online interaction and assignments	295	37.58	350	44.59	120	15.29	20	2.55
4	I feel confident to use additional online learning tools to supplement the ones used by my instructors	345	43.95	90	11.46	320	40.76	30	3.82

As reflected in Table 5, most of the respondents, over 70%, indicated agreement with their confidence in using online learning systems, online learning tools, and online-learning content for online interaction and assignments. However, only a little about half of them, 55.41%, felt confident to use additional online

learning tools to supplement the ones used by my instructors in their learning. These results indicate that the undergraduates in Nigerian universities perceived that they were competent to integrate online learning tools and resources in their education.

★ **Research Question 4: What challenges are identified by undergraduates as inhibitions against online learning?**

Table 6 presents the results on the challenges of online learning as perceived by undergraduates in universities in Kwara State, Nigeria.

Table 6: Challenges of Online Learning

S/N	Difficulties encountered while the courses/ seminar were developed online	Very Frequently	%	Frequently	%	Not Frequently	%	Rarely	%	Not at all	%
1	Lack of suitable device for online learning	295	37.58	245	31.21	95	12.10	70	8.92	80	10.19
2	Insufficient/ unstable internet services	370	47.13	280	35.67	90	11.46	30	3.82	15	1.91
3	Instructor's level of interaction with students online is lower than in traditional class	285	36.31	325	41.40	90	11.46	45	5.73	40	5.10
4	Difficulties while connecting to the platform	345	43.95	260	33.12	120	15.29	30	3.82	30	3.82
5	Losing signal during videoconferences	380	48.41	270	34.39	80	10.19	45	5.73	10	1.27
6	Delayed visualization of messages communicated on the platform	300	38.22	260	33.12	135	17.20	65	8.28	25	3.18
7	The sound is not clear (there are interruptions)	280	35.67	290	36.94	130	16.56	65	8.28	20	2.55

The results in Table 6 indicated that most students had challenges with their online learning experience during the COVID-19 pandemic. Insufficient/ unstable internet services and losing signal during videoconferences were rated by 82.80% of respondents to be frequent (very frequent and frequent), instructors' level of interaction with students online is lower than in traditional class identified by 77.71%. In comparison, 77.07% of them noted difficulties as challenges while connecting to the platform. Furthermore, the sound not clear (there are interruptions) was identified by 72.61%. Also, delayed visualisation of messages communicated on the platform by 71.34% and lack of suitable devices by 68.79% were challenges.

3.1 Discussion of Findings

The findings in this study indicated that over an average of the respondents had an online learning experience, and all of them agreed that their universities ran online classes during the covid pandemic. Most of the respondents opined they had more time to study perceived online learning as more theory. The majority of the students also felt that learning exclusively online made them learn less; however, most undergraduates considered online learning suitable for university education. These findings agree with earlier findings. [8, 9]

Findings indicated that respondents had their online learning experience during the COVID-19 pandemic mainly through WhatsApp, Zoom, Telegram, Google Classroom, Google Meet, and the Moodle Learning Management System. Other tools were like Edmodo, Microsoft Teams, Canvas LMS, and Socrative were rarely used by the respondents. These findings align with earlier findings. [8, 9]

Most of the respondents have confidence in using online learning systems, online learning tools, online-learning content for online interaction and assignments. The majority felt confident to use additional online learning tools to supplement tools used by their lecturers. The results agree with previous studies. [12, 12, 13]

Respondents indicated challenges with their online learning as insufficient/ unstable internet services, signal loss during videoconferences, and instructors' level of interaction with students online being lower than in traditional class. They also identified difficulties while connecting to the platform, sound not clear (there are interruptions), delayed visualisation of messages communicated on the platform, and lack of suitable devices. The results correspond with earlier results on the challenges of online learning.

4 CONCLUSIONS

From the analyses and the discussions on the results, the following conclusions can be reached in this study.

- 1 Although over average of the students had experienced online learning before the pandemic, most of them became exposed to institutionally provided online learning during the covid pandemic.
- 2 All universities in Kwara State, Nigeria, embarked on online instructional delivery due to the consequences of the COVID-19 pandemic and its attendant disruption of school activities.
- 3 The WhatsApp, Zoom, Telegram, Google Classroom, and the Google Meet were the most prominent tools used by lecturers in universities in Kwara State, Nigeria, for emergency remote teaching.
- 4 Undergraduates in universities in Kwara State perceived self-efficacy in online learning is very high, an indication of their readiness to use online platform for learning.
- 5 Challenges identified as inhibiting against online learning are mainly technical, infrastructural and pedagogical

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