UNDERGRADUATE STUDENTS' PERCEPTION OF BLENDED, ONLINE AND FACE-TO-FACE LEARNING APPROACHES

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Abstract

The COVID-19 pandemic brought a new phase to learning in the world. Online learning existed before the pandemic but was uncommon among full-time undergraduate students, especially in public institutions. The study sought the public and private universities' experience during COVID-19 and their preferred learning mode among blended, online, and face-to-face teaching. This study showed the population's perceptions of which mode of learning was preferred and which made learning more student-centred, considering their experience during the Covid-19 lockdown. Some authors reported that some learners performed well academically during the lockdown. The study adopted an analytical survey research design. Simple random sampling method was adopted to pick respondents from the Faculties of Science and Arts who had experienced the three learning modes from the University of Lagos and Mountain-Top University. A self-developed validated questionnaire was used to collect data. The data collected were analysed using frequency, percentages, and mean. The hypotheses were tested statistically at a 0.05 significance level with the chi-square test of independence. The findings of the study showed that face-to-face interaction was the preferred choice. Recommendations include the creation of an awareness of the need for Higher education to consider the preferred mode of learning by the learners to improve the output from the University system and be future-ready in the 21st Century.

Introduction

The world system has been altered since the advent of the COVID-19 pandemic. Many facilitators and learners took some time to adapt during the pandemic, considering that almost everyone had to adjust to the new normal situation that we found ourselves in. The pandemic era has greatly influenced both the

learners and the facilitators. Many facilitators and learners took turns having some form of continuing education training on online platforms. Some short courses were undertaken online, and it immensely helped both the facilitators and the learners adapt to the new normal of using the online mode of learning (World Bank, 2020; Sipon et. al., 2020; Singh et al., 2021; Aitokhuehi, 2021; Awal et al., 2021; Jin et al., 2021; Do et al., 2022; Atwa et al., 2022).

The face-to-face mode of learning, also referred to as the traditional mode of learning, was the norm in the Nigerian University system before the advent of COVID-19. Many colleges and institutions have adopted this mode of learning for full-time undergraduate programmes. Online learning came to the fore of usage during the COVID-19 pandemic. Many higher education institutions improved their usage during this period. The learning platforms for facilitating online learning include Moodle, Blackboard, Learning Management System (LMS) and the like. As with all the other modes, there are many advantages to using the online platform to teach. The advantageous use of online learning includes flexibility, easy access to study materials, self-directed learning, access to classes from recording, relaxed and comfortable environment (Galehdar et al., 2020; Polat et al., 2021; Zaki & Zaki, 2022; Alsayed & Althaqafi, 2022; Aristovnik, Karampelas, Umek, & Ravšelj (2023). Even though many Universities have a platform for their online learning programmes, they still offer blended learning. Blended learning gives more flexibility to the University system. It affords the student and facilitators more options to have classes and, at the same time, accommodating the various preferences of the students (Chisadza et al., 2021; Mali & Lim, 2021; Aduba & Mayowa-Adebara, 2021; Faltýnková, 2020; Gunes, 2019; Ananga & Biney, 2017; Wright, 2017; Gyamfi & Gyaase, 2015; Balci & Soran, 2009).

Statement of the Problem

The advent of COVID-19 brought the necessity of online classes. This was a welcome idea that helped to complete the session during the pandemic. Many facilitators and learners needed to prepare for the new-normal situation; hence, there was little resistance to the total use of online facilitation to complete the classes and the sessions during the pandemic. The option was to select the most conducive mode of learning for the hardworking teachers and students during the pandemic. With the successful eradication of COVID-19, some universities are gradually returning to the pre-pandemic era of their mode of learning. Examining the present situation, post-pandemic period. For some Universities, the situation has gradually returned to the status quo before the traditional mode of learning pandemic. The various modes of learning have their advantages and disadvantages inherent in them. The students' experiences in online and face-to-face learning situations can be examined in terms of their flexibility, engagement, support, stress, opportunity for group work, and motivation, especially regarding students' perceptions. For this reason, the study set out to find out the perception of students on face-to-face, online and blended learning and the factors that influenced the students' perception.

Research Purposes

The main purposes of this study are

1. To examine the students' experiences of the blended, online and traditional learning modes during and after the Covid-19 pandemic.

2. To assess the students' preferred learning mode between blended, online and traditional teaching.

3. To examine the influence of gender and age on the student's preferred mode of learning.

4. To examine the differences in student experiences of the blended, online and traditional learning modes between the public and private institutions after the COVID-19 pandemic.

Research Questions

1. What were the students' experiences with blended, online, and traditional learning modes during and after the COVID-19 pandemic?

2. What mode of learning is used or adopted by the Universities post-Covid-19 pandemic, and what is the student's preferred mode of learning?

3. What influence does the gender and age distribution have on the student's preferred mode of learning?

4. Is there any difference in student experiences of blended, online, and traditional learning modes between public and private institutions?

Research Hypothesis

There is no significant difference between public and private institutions' student experiences of blended, online, and traditional learning modes.

Methodology

The design for this study is the descriptive survey design. The study population comprised all students from the University of Lagos, a public institution, and Mountain-Top University, a private university. Simple random sampling method was adopted to pick 189 respondents from the Faculties of Science and Arts who had experienced the three learning modes from these Universities. A self-developed validated questionnaire was used to collect data. Experts in the field of Education validated the instrument. Respondents were required to select the appropriate responses to statements made in the questionnaire. A Google form was created to administer the questionnaire to the learners. The link to the Google form was sent to the selected respondents on their social pages and emails. Responses were also received electronically through the Google form. The questionnaire had an introductory letter stating the study's purpose and sought the respondents' cooperation. The data collected were analysed using frequency, percentages, and mean. The hypotheses were tested statistically at a 5% significance level with the chi-square test of independence.

Results

Demographic Characteristics

Table 1a: Gender of Participants

Gender	Per cent
Male	40.2
Female	59.8
Total	100.0

Table 1a above indicates that out of the 189 total respondents to the questionnaire, 40.2% were male, while 59.8% were female.

Table 1b: Participants' School

Level	Per cent
Public University	56.6
Private University	43.4
Total	100.0

Table 1b shows that 56.6% of the participants in the survey were from a public university, while 43.4% were from a private university.

Table 2a: Age of Participants

Age group	Per cent
18-22	66.7
23-27	29.1
28-32	3.2
33 and above	1.1
Total	100.0

Table 2b: Level of Study in School

Level	Per cent
Third Year (300 L)	43.4
Fourth Year (400 L)	50.8
Fifth Year (500 L)	5.8
Total	100.0

Table 2a above presents the age groups of the participants sampled in the study. It shows that 66.7% were in the 18- 22 age group, 29.1% were 23-27 years, 3.2% were 28-32 years, and 1.1% were 33 years and above. Table 2b above indicates that 43.4% of respondents were third-year or 300-level students, 50.8% were fourth-year or 400-level students, and 5.8% were fifth-year or 500-level students.

Table 3: Participants' Faculty / College

Level	Per cent
Faculty of Arts	3.7

College of Basic & Applied Sciences	26.5
College of Humanities, Management & Social Sciences	19.0
Faculty of Science	50.8
Total	100.0

Table 3 above indicates that 3.7% of respondents were in the Faculty of Arts, 26.5% in the College of Basic & Applied Sciences, 19.0% in the College of Humanities, Management and Social Sciences, while 50.8% were in the Faculty of Science.

Research Question One: What are the students' experiences with the blended, online and traditional learning modes after the COVID-19 pandemic?

Table 4: Students' Learning Experiences with Online, Traditional and Blended Learning

Learning Mode Experiences	Online Learning (%)	Traditional Learning (%)	Blended Learning (%)
Most Flexible	22.2	37.6	40.2
Provides Better Student Engagement	10.6	70.4	19.0
Results in More Student Motivation	13.8	59.8	26.5
Most Stressful	15.9	75.1	9.0
Provides Better Support Services	21.2	54.5	24.3
Enables Better Group work	14.3	63.5	22.2

Table 4 above is data from the questionnaire on learners' preferred learning modes based on various learning experiences. Regarding experience with flexibility, it shows that 22.2% of respondents indicate online learning as the most flexible, 37.6% indicate traditional as the most flexible, and 40.2% for blended. Regarding engagement, 70.4% of respondents indicate that traditional learning provides better student engagement, while 10.6% and 19.0% are online and blended, respectively. For motivation, 59.8% of respondents indicate more student motivation with the traditional mode of learning, while 13.8% and 26.5% are for online and blended, respectively. 75.1% of respondents indicate that the traditional mode of learning is the most stressful, while 15.9% and 9.0% are online and blended, respectively. For support services experience, 54.5% of respondents indicate that the traditional mode of learning provides better support services, while 21.2% and 24.3% are online and blended, respectively. Regarding enabling better group work, 63.5% of respondents indicated that traditional mode enables better group work, 14.3% for online and 22.2% for blended. Overall, despite having the highest response for the most stressful, the traditional mode of learning is still preferred considering all the elements of the student's learning experience.

Research Question Two: What mode of learning is used or adopted by the Universities post-Covid-19 pandemic, and what is the student's preferred mode of learning?

Table 5: Learning Mode Used by Universities

Learning Mode	Public	Private	Total

	(%)	(%)	(%)
Traditional	18.5	18.5	37.0
Online	13.2	13.2	26.5
Blended	24.9	11.6	36.5
Total	56.6	43.4	100.0

Table 5 above shows the public and private universities' learning mode after the Covid-19 pandemic. This indicates that public universities have adopted a blended mode of learning more than traditional and online learning. On the other hand, private universities have adopted the traditional mode more than online and blended modes. Both indicate that the online mode has the least adoption of the three modes post-COVID-19 pandemic. Specifically, both schools have adopted a mode that includes face-to-face engagement.

Table 6: Students' Preferred Learning Mode

Learning Mode	Public (%)	Private (%)	Total (%)
Traditional	23.8	19.6	43.4
Online	9.0	5.3	14.3
Blended	23.8	18.5	42.3
Total	56.6	43.4	100.0

Table 6 above shows the preferred learning mode by the students in both the universities and the public university, indicating a preference for both the traditional and the blended, while the traditional is slightly more preferred than the blended in the private university. In other words, the student's preference is a mode of learning that includes face-to-face engagement. This is consistent with the current learning mode used by universities.

Research Question Three: What influence does gender and age distribution have on the student's preferred mode of learning?

Table 5: Student Preference by Gender

Learning Mode	Male (%)	Female (%)	Total (%)
Traditional	18.0	25.4	43.4
Online	6.3	7.9	14.3
Blended	15.9	26.5	42.3
Total	40.2	59.8	100.0

Table 5 above shows students' learning mode preferences by gender. It indicates that of the 40.2% that are male, 18.0% preferred traditional mode, 6.3% preferred online, and 15.9% blended. Of the 59.8% female, 25.4% preferred traditional mode, 7.9% online and 26.5% blended. Relative to the male and female totals,

as shown in Table 5a below, the learning mode distribution for the male is similar to that of the female. Therefore, gender does not influence the students' preferred learning model.

Table 5a: Normalised Preference by Gender

Learning Mode	Male (%)	Female (%)	Total Avg. (%)
Traditional	44.7	42.5	43.4
Online	15.8	13.3	14.3
Blended	39.5	44.2	42.3
Total	100.0	100.0	100.0

Table 6: Student Learning Preference by Age

Learning Mode	18-22 (%)	23-27 (%)	28-32 (%)	33+ (%)	Total (%)
Traditional	27.5	14.8	0.5	0.5	43.4
Online	10.6	2.6	0.5	0.5	14.3
Blended	28.6	11.6	2.1	0.0	42.3
Total	66.7	29.1	3.2	1.1	100.0

Table 6 above shows students' learning mode preference by age group. It indicates that of the 66.7% of 18-22-year-olds, 27.5% preferred traditional mode, 10.6% preferred online, and 28.6% blended. Of the 33.3% 23 years and older, 15.8% preferred traditional mode, 3.6% online and 13.7% blended. Relative to the 18-22 age group and 23+ age group totals, as shown in Table 6a below, the learning mode distribution for the 18-22 age group is like that of the 23+ age group. Therefore, the students' preferred model of learning is not influenced by age group.

Table 6a: Normalised Preference by Age

Learning Mode	18-22 (%)	23+ (%)	Total Avg. (%)
Traditional	41.3	47.6	43.4
Online	15.9	11.1	14.3
Blended	42.9	41.3	42.3
Total	100.0	100.0	100.0

Research Question Four: Is there any difference in student experiences of the blended, online and traditional learning modes between the public and private institutions after the COVID-19 pandemic?

The data in Table 4 above is split into public and private institutions in Table 7 below to analyse this research question.

Table 7: Public & Private Institutions' Student Learning Experiences

Learning Mode Experiences	Public University	Private University

	Online (%)	Trad (%)	Blended (%)	Online (%)	Trad (%)	Blended (%)
Most Flexible	24.3	31.8	43.9	19.5	45.1	35.4
Provides Better Student Engagement	9.3	68.2	22.4	12.2	73.2	14.6
Results in More Student Motivation	15.0	56.1	29.0	12.2	64.6	23.2
Most Stressful	14.0	80.4	5.6	18.3	68.3	13.4
Provides Better Support Services	23.4	52.3	24.3	18.3	57.3	24.4
Enables Better Group work	14.0	58.9	27.1	14.6	69.5	15.9

From Table 7 above, the students of both the public and private institutions indicate the same learning experience outcome for engagement, motivation, most stressful, support services and enabling better group work. Regarding flexibility, the public institution student experience in the blended mode is more flexible with 43.9%, followed by the traditional mode with 31.8% and online with 24.3%. For the private institution student experience, however, the traditional mode was more flexible with 45.1%, followed by the blended mode with 35.4% and the online mode with 19.5%. Despite this difference, both institutions' student experience show that the online mode is the least flexible as it causes distraction and lack of focus, requires substantial network data needs, hence funding, requires power and network stability.

Research Hypothesis

There is no significant difference in the student experiences of the blended, online and traditional learning modes between the public and private institutions after the COVID-19 pandemic.

This was analysed using the Chi-square test of independence, and the contingency table for each category of learning experience is shown in Table 8 below.

Table 8: Chi-Square Contingency Table of learner experience with learning modes

Obs. Freq.	Students' Experience											
	Flexibility		Engagement		Motivation		Stress		Support Service		Better Grp work	
Modes	Pub.	Priv.	Pub.	Priv.	Pub.	Priv.	Pub.	Priv.	Pub.	Priv.	Pub.	Priv.
Trad	34	37	73	60	60	53	86	56	56	47	63	57
Online	26	16	10	10	16	10	15	15	25	15	15	12
Blended	47	29	24	12	31	19	6	11	26	20	29	13
Total	107	82	107	82	107	82	107	82	107	82	107	82
Expected Frequency												
Trad	40.2	30.8	75.3	57.7	64.0	49.0	80.4	61.6	58.3	44.7	67.9	52.1

Online	23.8	18.2	11.3	8.7	14.7	11.3	17.0	13.0	22.6	17.4	15.3	11.7
Blended	43.0	33.0	20.4	15.6	28.3	21.7	9.6	7.4	26.0	20.0	23.8	18.2
Statistics												
p-Value	0.172		0.368		0.493		0.101		0.679		0.175	
DF	2		2		2		2		2		2	
X2 Stat	3.53		2.00		1.42		4.58		0.78		3.48	
X2 Crit	5.99		5.99		5.99		5.99		5.99		5.99	

Conclusion: Do not reject the null hypothesis since X2 is less than the critical value for each category of experience

Based on the result from Table 8, for each of the categories of learner experience - flexibility, engagement, motivation, stress, support services and group work – the *P-value* is greater than 5%. We fail to reject the null hypothesis, indicating that the difference in the student experience with learning modes between the public and private universities is not significant. Therefore, the difference identified in Table 7 or Research Question Four above regarding experience with flexibility is insignificant since the X2 is less than the critical value of the flexibility result of Table 8. In other words, the responses to learner experience with learning modes for both public and private universities are the same or similar, and any differences are just a chance. The blended mode is perceived to be the most flexible of the three modes in terms of flexibility. In contrast, the traditional mode is perceived to top the student experience in terms of student engagement, motivation, stress, better support services, and enabling better group work.

Discussion of findings

The findings from the study show that the traditional mode of learning is the preferred mode of learning in consideration of all the elements of a student's learning experience. This is in terms of the student's experiences with flexibility, engagement, motivation, stress level, support services experiences, and better group work. Generally, despite having the highest response for the most stressful, the traditional learning mode is still preferred considering all the elements of the student's learning experience. This is supported by the findings of Mali and Lim (2021); their research concluded that because humans are social beings, they prefer face-to-face interaction, which will not be experienced in the online learning mode. However, this contradicts the assertion of Alzahrani (2022) in a study conducted during the COVID-19 pandemic in which the learners preferred the online learning method to the traditional method. Further study might be required to know whether the environment in which the study was conducted matters because many factors are putting online learning at a disadvantage in developing countries, ranging from power supply, access to stable internet services, devices to access the internet, conducive learning environment, funds to service buy data and so on.

The findings also revealed that public universities embraced the blended mode of learning post-COVID-19 pandemic more than traditional and online learning, while private universities, on the other hand, adopted the traditional mode more than the online and blended modes. Both, however, showed that the online mode is the least preferred option. The student's favourite mode of learning is the one that includes face-to-face engagement. This is supported by the findings of Wright (2017), Balci, and Soran (2009), who concluded in their research that blended modes of learning are preferred. It was suggested that online learning should be infused with face-to-face mode of learning in order to maximise their benefits.

Furthermore, the study indicated that gender and age had no influence on the student's preferred mode of learning. Also, in spite of the difference observed in the student experience on the preferred learning modes in both private and public institutions, the online learning mode was still the least flexible, as expressed by the students, as it causes distraction, lack of focus, requires substantial network data needs hence funding, requires power and network stability. This is supported by the findings of (Singh et al., 2021 and Mali &Lim, 2021).

Conclusion

The study revealed that the most preferred mode of learning in private and public institutions is under consideration post-COVID-19. The conclusion was drawn from the student learning preferences identified in the study. It is paramount to consider students' preferred learning mode to maximise the outcome of their educational pursuits, which will yield the maximum output considering the minimal resources available to higher education.

Recommendation

From the findings of this study, it is recommended that there should be an immediate awareness of the need for Higher education to consider learners' preferred mode of learning. At the same time, steps should be taken to encourage them to develop interest in the other modes. This will help to improve the output from the University system and thereby make our higher educational institution future-ready

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