Availability and Utilisation of Hybrid Learning in Business Education in Public Colleges of Education in Enugu State, Nigeria

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ABSTRACT

The study examined the impact of gender on availability and extent of utilization of hybrid learning technologies (HLTs) in teaching Business Education in Public Colleges of Education in Enugu state. The study adopted a descriptive survey design. The sample population for the study comprised of 40 Business Education lecturers selected from the Public Colleges of Education. A structured questionnaire made up of two sections was developed for the study. Two research questions and two null hypotheses guided the study. The items were rated on a four (4) point Likert scale and mean scores were used to analyze the research questions while t-test was used in testing the hypotheses at 0.05 level of significance. The findings revealed that the respondents rated 10 out of 16 HLTs as rarely available and rarely utilized for effective delivery of courses instructions. The results also showed that there were no significant differences in mean ratings between the male and female lecturers on availability and extent of effective usage of the technologies in education. It is recommended that hybrid technologies should be provided by stakeholders in education and workshops, re-trainings, incentives should be given lecturers to motivate them to fully embrace this innovative method of teaching.

Keywords: Hybrid; Business education; HLTs; lecturers; Enugu; Colleges of Education.

INTRODUCTION

The advancement in technology have brought about changes in the lives of teachers and students and educational development has reached to an age where normal traditional chalk and chalkboard teaching and learning delivery is somehow becoming obsolete due to such advancement. Among such technologies however is hybrid learning strategy. Hybrid learning is a new term in relation to the development of the 21st century technology (Wright, 2017). The students in 21st century and ICT age are bored with long lectures and dictations, note memorization and interaction in the classroom because technology is making teaching better, more fun and interactive (Piontek, 2021).

The Hybrid learning was developed in the 1960s and in 1999, the learning methodology was used by an Atlanta Based Training business for the online course (Josnara, et al, 2021). Hybrid learning combines online learning with traditional classroom-based teaching-learning practice through hybrid technology. Hybrid learning in the classroom is a concept that began as a higher education idea and now transferred down into elementary grades. According to Kuo, Blland, Schroder and Walker (2014), Hybrid learning is an approach that combines face-to-face interactions with technology-based learning. According to Schroder and Walker (2014), Hybrid learning is an approach that combines face-to-face interactions with technology-based learning. Hybrid learning is a learning method where the instructor teaches offline and online students through virtual mode using hybrid technology like videoconferencing. It is a method that tries to give every best opportunity to the offline and online students in the class simultaneously.

Hybrid learning is a combination of two environments (online and face-to-face contexts). The face-to-face component of learning is where students actively collaborate and interact with instructional content with the focus of gleaning information to solve problems, while the teacher plays the role of a facilitator. This is based

on the ethic that learning is more effective when learners are encouraged to analyse, evaluate, and reorganize information to solve real-life problems (Mbah, & Odike, 2021). Hybrid learning includes effective instructional strategies for teaching with technology in and out of the classroom and offers improved classroom efficiency and increased teaching flexibility (Kayii .et al., 2018). Similarly, learning becomes more convenient for students, as well as better learning outcomes will be ensured through engagement and collaboration.

Hybrid learning allows sufficient time during its face-to-face components to effectively engage learners with problem-solving tasks that encourage their cognitive development, rather than exposing them to learning experiences that are fraught with a repetitive accumulation of facts and knowledge only. Hybrid learning strategy allows an opportunity to actively engage the students to exercise their minds to apply their gained knowledge to resolve unfamiliar problems, resulting in the development of their cognitive skills.

Quadri, &Abidum, (2017) opined that hybrid learning has four properties introduced, particularly, (1) mix of collective learning and individual learning, (2) mix of synchronous learning and asynchronous learning, (3) a mix of self-paced and group-paced learning, and (4) mix of formal learning and non-formal learning in terms of lifelong learning incorporation and/or setting of learning. Hybrid learning requires a unique management of time in delivering instructional approaches, particularly through (a) synchronous learning similar to an online classroom that can be taught on a one-to-one or one-to-many basis or (b) asynchronous learningthat provides an ideal platform for distance learning approaches. The worldwide COVID-19 pandemic of the past three years, the lockdowns and social distancing imposed by governments to control the epidemic resulted in the suspension of traditional face-to-face classes in educational institutions (Alonta et al,. 2022). In response to this tremendous impact, hybrid learning and teaching have been widely adopted as a substitution for the face-to-face approach.

Different types of hybrid learning models which lecturers can adopt in effective teaching and learning include: Project Model, Flipped Classroom, Stations or Rotations, Differentiated Model, Synchronous learning, Flex Model, Self-blend /A LA Carte model and Virtual Accommodation model. (Study.com 2024; Powell, et al 2022; Staker and Horn, 2022; Drysdale, et al. 2013; Jimoh-kadiri & Bupo, 2011; Edokpolor & Egbiri, 2017).

Business education as an academic discipline is offered in institutions of higher learning in Nigeria with options in office technology and management, and accounting. These two options are to enable students to gain the appropriate skills for them to participate adequately in the world of work. The programme is designed to equip individuals with the appropriate skills, knowledge, and attitudes, that will empower them to function effectively either in educational institutions or other sectors. It is designed to equip students with the required pedagogical and business competencies required for teaching business knowledge, concepts, skills, and attitudes (Jimoh-kadiri & Bupo (2011). The objectives of business education include to: prepare individuals for office career, competencies for entrepreneurship; provide a good blend of business understanding and information and communication technology; enable individuals to impart these attributes to learners (Edokpolor & Egbiri, 2017). It is the aspect of educational training that empowers an individual with adequate knowledge, concepts, understanding, skills, and attitudes in business activities for usage in careers as an administrator, teacher, or manager in the business world (Amesi, 2018). The focus is to equip learners with knowledge, skills, and attitude that will enable them to effectively train others, manipulate office technologies and information systems. It is a discipline that promotes work ethic and the preparation of individuals for skilled jobs, through the development of their problem-solving skills. It is an aspect of vocational education training that is designed to facilitate the acquisition of appropriate knowledge, skills, capabilities, and the overall competences, that enable an individual to be self-reliant, contribute to sustainable economic growth, and ultimately eradicate poverty.

According to Ezeabii (2017) business education is an aspect of vocational education which equips individuals with the necessary skills and theoretical knowledge needed for performance in the business world either for job performance or for self-employment. Business education students' skills acquisition is pivotal in the 21st century economy. Business education is that type of education that inculcates in its recipients' attitudes, knowledge, skills, values that is required in the business world. This is a means of producing a healthy, literate, self-reliant citizen that would create wealth for human development thereby resulting in sustainable nation's development at large. Business education like many other subjects in the school system has been defined in several ways by several scholars, to suit different situations and purposes. Bilyaminu (2011) views business education as an aspect of a total education programme that provides the knowledge, skills, attitudes and understanding needed

to perform in the business world as a producer and/or consumer of goods and services. Business Education is offered in higher institutions like Universities and colleges of Education.

Colleges of Education is a section of tertiary institutions in Nigeria charged with production of middle level professional teachers which culminates in the award of Nigerian Certificate in Education (NCE), These institutions offer a standard 3-year programme in arts, sciences and vocational courses among which is Business Education. Learning conditions for more than 2 years have changed due to the covid-19 pandemic which requires learning to be dominated by online learning activities. Various approaches and learning models are applied to maintain the quality of education during the pandemic. This condition also requires the world of education to prioritize the use of technology in learning activities. One of the learning models applied is hybrid learning. Hybrid learning is a learning model that combines face-to-face methods and electronic learning -simultaneously.

Hybrid learning has the potential to merge the best of traditional and Web-based learning experiences to create and sustain vital communities of inquiry, many higher education institutions are now quietly positioning themselves to harness its transformational potential. The concept of hybrid learning, however, is not simply a combination of online and Face To Face (FTF) instruction. Rather, it focuses on optimizing achievement of learning objectives by applying the "right" learning technologies to match the "right" learning to the "right" person at the "right" time (Graham, et al, 2014). A grid of 12 technological tools that results from the reviews, observations, experiences and design actions have been made, taking into consideration those used in different contexts, learning environments and experimentations (Andrea, 2021).

Statement of the Problem

Due to advances in technology, educational system is experiencing transformational changes in pedagogy and in administration of the system. The increment of mobile devices and the need to have information available anyplace and anytime has led to changes in the way in which teaching and learning are performed. Challenges encountered from insecurity (unknown gunmen/kidnappers) and natural disaster (Covid-19) have heightened the need for students to access instructions from the comfort of their respective homes without necessarily travelling miles away for that purpose. In the last few years, integrated computer systems known as Hybrid learning have rapidly emerged and are having and will increasingly have profound effects on tertiary institution teaching and learning. Bertea (2019) assumed that the blog and Google classroom combined with lecture method of instruction delivery may produce a better learning outcome.

However, literatures on hybrid learning revealed divisive views among researchers. Some studies revealed that conventional strategies enhanced students' performance; because too much technology make hybrid learning programs appear too flashy, and students may not take it seriously (Umoh & Akpan, 2018). Also, Adidoye (2019) reported that learners preconceived traditional classroom to be more effective and accessible, because they believed that most often, they are familiar with the learning environment,

The utilization of Hybrid pedagogy in education has not achieved its desired outcomes in the country, as most of the graduates have continually failed to match their skills with the expectations of their potential employers. This is as a result of lack of technological skills on the part of the teachers and poor content, among others. Most of the teachers may not adequately possess the pedagogical skills to deploy technology into their practice. This has made it difficult for them to embrace both the traditional approach and technology-mediated learning, which will effectively equip the students to globally meet the needs of the society. Also, computer education have not been integrated into the business teacher education curricula effectively. This makes it difficult for both the teachers and their students to utilize hybrid technologies. When learning technologies are introduced, attention is often paid to the technology implementation, while the design of the actual appropriate content is left with too little time and budget to create a successful programme.

Some of the Colleges of Education have adopted the online teaching and learning but yet to integrate fully the hybrid learning. This may be due to non- availability and lack of utilization of hybrid learning technologies in teaching and learning of Business education in colleges of education. This study is aimed at determining the availability and the level of the utilization of hybrid learning technologies in teaching and learning of business education in colleges of education.

Purpose of the Study

The main purpose was to examine the availability and the level of utilization of hybrid learning technologies in teaching and learning of business education in public Colleges of Education in Enugu state, South East Nigeria. In specifics, the study aims were:

- ❖ to determine the availability of hybrid learning technologies for teaching and learning of business education in Colleges of Education.
- ❖ to ascertain the level of the utilization of hybrid learning technologies in teaching and learning of business education in Colleges of Education.

Research questions

Research questions in this study were:

* To what extent are the hybrid learning technologies available in public Colleges of education in Enugu state, South East Nigeria?

* To what extent are the hybrid learning technologies utilized in teaching and learning of Business Education courses by Business Education lecturers in Colleges of Education?

Hypotheses

The following null hypotheses guided the study:

Ho_1 There is no significant difference in the mean responses of lecturers on the availability of hybrid learning technologies for teaching Business Education in Colleges of Education in Enugu state, South East Nigeria based on gender.

Ho_2 There is no significant difference between the mean scores of male and female Lecturers on utilization of hybrid learning technologies in teaching of business education courses in Enugu state, South East Nigeria.

Method

This study is a descriptive survey research design. The population of the study comprised of all the lecturers teaching Business Education in Government owned Colleges of Education in Enugu State. A sample size of 40 lecturers, representing 87% of the population was selected through simple random sampling technique was used for the study. The questionnaire was developed and given to two experts for content validation. The respondents were required to rate the availability and extent of utilization of the technologies based on a Likert Scale. Part A of the questionnaire collected data on gender and ownership structure of the College of Education. The Part B of the instrument sought for information on availability of the hybrid technologies and had a 4-point response option ranging from Not Available (NA) (1point); Rarely Available (RA) (2points); Moderately Available (MA) to Always Available (AA) (4points) and consists of 16 items. The last section of the instrument requested for data on utilisation of the hybrid technologies listed on Part B on a four-point response options ranging from Not Utilised (NU) (1point); Rarely Utilised (RU) (2 points); Moderately Utilised (MU) (3 points) to Highly Utilised (HU) (4points). The mean responses interpreted based on the following ranges: 1.00 – 1.49 = Not available (NA) or Not utilized (NU); 1.50 – 2.49 = Rarely available (RA) or Rarely utilized (RU); 2.50 – 3.49 = Moderately available (MA) or Moderately Utilised (MU); 3.50 – 4.00 = Always available (AA) or Highly utilized (HU).

The reliability of the instrument was assessed using Cronbach Alpha method and reliability coefficient. The cluster coefficients obtained ranged from 0.93 to 0.95 and the overall coefficient was 0.92 was obtained. The data obtained were analysed using mean responses, t-test statistical tool was used to test the null hypotheses at 0.05 level of significance.

RESULTS AND DISCUSSION

RESULTS

The following section reports the results of the participating academics' feedback on availability and extent of utilization of Hybrid learning technologies in public Colleges of Education

Research Question 1: To what extent are the hybrid learning technologies available in public Colleges of education in Enugu state, South East Nigeria?

The responses were presented in Table 1

Table 1: Responses on the availability of Hybrid learning Technologies

S/No	ITEM	Male Respondents		Female Respondents		Mean response		Remarks
		X	Sd	X	Sd	X	Sd	
1	Digital Smartboard	1.80	0.30	1.90	0.21	1.83	0.25	RA
2	Analogic Smartboard	1.82	0.31	1.89	0.22	1.83	0.26	RA
3	Smart Projection	2.40	0.22	2.35	0.12	2.37	0.18	RA
4	Videoconference System	2.52	0.11	2,54	0.13	2.53	0.12	MA
5	Moodle	1.90	0.10	1.93	0.12	1.92	0.11	RA
6	Smart camera System	2.01	0.02	1,98	0.13	2.00	0.08	RA
7	Surface Digitaliser	1.80	0.20	1.80	0.19	1.80	0.20	RA
8	Zoom communications platform	3.75	0.01	3.80	0.08	3.79	0.04	AA
9	Student Response Software	3.50	0.12	3.51	0.10	3.51	0.11	AA
10	Slack messaging app	2.10	1.01	2.00	0.80	2.05	0.09	RA
11	Collaborative Software	2.08	0.80	2.10	1.00	2.09	0.09	RA
12	Cloud Software	2.89	0.04	2.85	0.13	2.87	0.08	MA
13.	Virtual Classroom Software	1.85	0.13	1.80	0.02	1.83	0.08	RA
14	Assessment Software	1.85	0.02	1.90	0.02	1.87	0.02	RA
15	Personal Device	3.85	0.02	3.90	0.02	3.87	0.02	AA
16	Computers	3.90	0.01	3.92	0.02	3.91	0.02	AA

	Total Mean	40.02 3.34	40.17 2.51	40.0 61.76	
	Average of mean	2.50 0.21	2.51 0.16	2.50 0.11	MA

Keys: X=mean; Sd= standard deviation; RA = rarely available; MA = Moderately available; AA= Always available.

The results in Table 1 show that 10 items out of the 16 listed on Hybrid learning technologies have mean ratings ranging from 1.80 to 2.35 indicating Rarely available for use to effectively carry out hybrid learning for Business Education students in public Colleges of Education in Enugu state while 6 of the technologies were moderately and always available. Against the overall benchmark of 2.50, the average response for both male and female lecturers, these technologies were rated to be moderately available with means of 2.50 and 2.51 respectively. This implies that the 10 items were accepted to be rarely provided/available for effective utilization of hybrid instructional approaches in Business Education in Colleges of Education. The standard deviations for all the items are within the same range indicating that respondents are homogenous in their mean ratings.

Research Question 2: To what extent are the hybrid learning technologies utilized in teaching and learning of Business Education courses by Business Education lecturers in Colleges of Education?

The responses of the sample population according to gender is presented in Table 2 below.

Table 2: Responses on the extent of utilization of Hybrid learning Technologies

	ITEM	Male Respondents X Sd	Female Respondents X Sd	Mean response X Sd	Remarks
1	Digital Smartboard	1.60 0.03	1.80 0.02	1.70 0.02	RU
2	Analogic Smartboard	1.6 0.03	1.80 0.03	1.71 0.03	RU
3	Smart Projection	2.40 0.03	2.45 0.12	2.43 0.08	RU
4	Videoconference System	2.62 0.01	2,50 0.03	2.56 0.04	MU
5	Moodle	1.90 0.12	1.95 0.02	1.93 0.07	RU
6	Smart camera System	2.00 0.02	1,96 0.10	2.00 0.06	RU
7	Surface Digitaliser	1.6 0.20	1.80 0.10	1.70 0.15	RU
8	Zoom communications platform	3.95 0.01	3.90 0.04	3.93 0.03	HU
9	Student Response Software	3.80 0.02	3.71 0.10	3.75 0.06	HU
10	Slack messaging app	2.10 0.01	2.00 0.04	2.05 0.03	RU
11	Collaborative Software	2.00 0.08	2.01 1.00	2.01 0.09	RU
12	Cloud Software	3.59 0.04	3.85 0.03	3.74 0.04	HU
13.	Virtual Classroom Software	1.65 0.03	1.60 0.02	1.63 0.03	RU
14	Assessment Software	1.60 0.03	1.70 0.02	1.70 0.03	RU

15	Personal Device	3.95 0.02	3.90 0.02	3.93 0.02	HU
16	Computers	3.95 0.01	3.96 0.02	3.96 0.02	HU
	TOTAL Mean	40.33 0.69	40.89 0.81	40.73 0.80	
	Average of Mean	2.52 0.04	2.56 0.05	2.55 0.05	MU

Keys: X=mean; Sd= standard deviation; RU = rarely utilised; MU = Moderately utilised;

HU= highly utilised.

From Table 2, the effect of gender on effective utilization of Hybrid teaching technologies shows that 10 items listed have mean ratings ranging from 1.60 to 2.40for male lecturers and 1.63 to 2.45 female lecturers were not effectively utilized for teaching through hybrid technologies. However, both genders indicated that 6 technologies were effectively being utilized. The grand mean values of both genders indicated moderate and effective usage of the technologies in courses delivery in the Colleges studied. However, the results from the means indicate that the female gender are more active in utilization of various Hybrid technologies in teaching Business Education.

Hypothesis Testing

The two null Hypotheses were tested using Students t-test at 95% confidence level (0.05 level of significance). The results obtained were presented in Tables 3 and 4 below.

HO_1: There is no significant difference between the mean scores on the availability of hybrid

learning technologies as perceived by male and female lecturers teaching Business Education in Colleges of Education in Enugu state, South East Nigeria.

The t- test statistic result is presented in Table 3 below.

Table 3: t-test Result on availability of hybrid learning technologies for teaching in Colleges of Education Lecturers.

Respondents	N	Mean	SD	**Df**	t-calculated	t- critical	Level of sig	Decision
Female	20	2.51	0.16	38	0.2387	1.684	0.05	Accept HO_1
Male	20	2.50	0.21					

Table 3 above revealed a t-calculated value of 0.2387 which is lower than the standard t-critical value of 1.684; thus, the null hypothesis was accepted. The result therefore is that there is no significant difference in the mean ratings of male and female lecturers on availability of hybrid learning technologies by both male and female lecturers of Government owned Colleges of Education in Enugu state.

Ho_2 : There is no significant difference between the mean scores of male and female Lecturers in

effective utilization of hybrid learning technologies in teaching of business education courses in Enugu state, South East Nigeria.

The t- test statistic result is presented in Table 4 below.

Table 4: t-test Result on scores of male and female Lecturers in effective utilization of hybrid learning technologies for teaching Business Education in Colleges of Education

Respondents	N	Mean	SD	**Df**	t-calculated	t- critical	Level of sig	Decision
Female	20	2.54	0.08	38	1.1186	1.684	0.05	Accept HO_2
Male	20	3.52	0.08					

Table 4 above showed a t-calculated value of 1.1186 which is lower than the standard t-critical value of 1.684; thus, the null hypothesis was accepted. The result therefore is that there is no significant difference in the mean ratings of male and female Colleges of Education Lecturers in effective usage of hybrid model in teaching Business Education.

DISCUSSION

The findings of this study in respect to the research questions identified 10 Hybrid learning technologies (HLTs)that are rarely available for effective use in the teaching of Business Education via Hybrid model in public Colleges of Education while only 6 HLTs were either moderately or always available. Similarly, only those 6 available HLTs were being effectively utilized for teaching. Findings of the study revealed that respondents rated among others the followings as available and utilized effectively: Videoconference System, Zoom communication, Computers, etc. However, most items in the listed major and standard HLTs were not easily available and consequently rated as not effectively used by the respondents These rarely available gadgets are those highly needed to meet the needs of students' participation in classroom and online, application of Artificial Intelligence (AI) technology in teaching the students, assign homework and upload teaching material on the cloud platform for students to view later. The responses trend was the same for both male and female lecturers.

The findings on the hypotheses tested showed that there are no significant differences in the mean ratings on availability and usage of hybrid learning technologies by both male and female lecturers of government owned Colleges of Education. Regarding gender differences in utilization of hybrid technologies in teaching, there is little empirical evidence so far for the existence and the effects of these, and the few studies that exist are often contradictory. While one position argues that there are gender specific behavior patterns that may lead to a discrimination of women using e-learning (Astleitner& Steinberg, 2005), others argue that e-learning, through its flexible and interactive learning approach favors particularly women (Bruestle et al., 2009). There is evidence supporting that men and women express varying degrees of anxiety, acceptance, and interest in new technologies across time (McCoy and Heafner, 2004) and the gender gap is narrowing over time as shown by the result of this present study. Another work (Nur-Mustafa.,2014) with similar focus observed negligible gender gaps pointed at no significant gender differences in hardware and software use. The results of a study carried out by Danko and co-workers (2020) show that gender positively correlates with Hybrid learning technologies use and that particular technology tools and their pedagogical uses are more frequent among female teachers whereas males scored higher for certain ICT-related attitudes. This implies that gender may be viewed as a predictor of certain types of attitudes to ICT use in university instruction.

However. earlier research findings suggest that academics perceive effective hybrid teaching made possible by adequate HLTs have certain advantages such as offering more flexibility and convenience to students, promoting personalized and interactive teaching, and providing increased opportunities for students to engage and work together (Garrison and Kanuka ,2004). According to a study, (Wanner T and Palmer, 2015) academics judged hybrid teaching approaches to be effective, particularly in terms of flexibility and convenience. These positive perceptions of effectiveness are in line with earlier studies on the advantages of hybrid teaching techniques.

This finding is in agreement with the views of Nikolas, (2022) who reported that that availability of HLTs for hybrid teaching are essential to achieve the benefits of the model. Wagner,Hassan, and Head, (2008) were of the views thatHLTs are instrumental to achieving meaningful results in using the learning and teaching model.

The results of the current study reveal the experience of academics on availability and utilization of HLTs in delivering hybrid instruction through their evaluation of the practice. The findings contribute to providing empirical data regarding the academics' feedback on hybrid instruction based on an institution-wide practice in Colleges of Education in Enugu State. The results supplement the existing body of literature in this area.

Overall, the participating academics perceived themselves as technically ready for conducting hybrid instruction. This finding is consistent with that of the early study by Tang et al. (2021) Similar to the study by Raes et al.(2020), the present study found that Hybrid learning technologies are moderately available for use but when itemized, 10 of such technologies are rarely available for use. This finding reveals the importance of providing institutional support in areas such as technical, administrative, and teaching for academic staff in support of hybrid instruction.

CONCLUSIONS

This study reveals the availability and extent of utilization of hybrid learning technologies by Lecturers in Public Colleges of Education in Enugu State. The findings show that most of the technologies needed for hybrid model of teaching are moderately available and utilized moderately to deliver course instructions. For both sexes, there is no significant difference in their mean scores with respect to the opinion on availability and effective utilization of these technologies.

Recommendations

Future research should cover a larger number and broader range of participants, such as academics from various educational institutions, to evaluate the availability and level of utilisation of HLTs in their colleges.

The owners of Institutions should encourage the lecturers by providing HLTs and enabling environment for them by way of workshops, re trainings and incentives to motivate them.

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