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Prof T A Umoru
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KWASU INTERNATIONAL JOURNAL OF EDUCATION (KIJE)

Call for papers

The Editorial Board of Kwasu Journal of Education (KIJE) invites articles from scholars for consideration and publication in her journals which will be published once in a year. Prospective contributors to this journal are encouraged to focus more on empirical based research studies.

Guidelines for manuscripts

1. Manuscripts submitted for publication should be 14 pages maximum, including references, using Times New Roman, 12 Font. Articles must be typewritten double spaced on one side only and on A4 paper. Author's contact address, Email and telephone numbers..
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9. Article must be submitted in three hard copies and one electronic copy {in Microsoft word}.

NB

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QUALITY ASSURANCE MECHANISMS FOR PROMOTING EMPLOYABILITY SKILLS IN BUSINESS EDUCATION PROGRAMMES IN TERTIARY INSTITUTIONS IN NIGERIA

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Abstract

This paper examined quality assurance mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State, Nigeria. Three research questions and three hypotheses were tested at a 0.05 level of significance. The study adopted a descriptive survey design. The population for the study comprised 56 business education lecturers in the seven tertiary institutions in Kwara State. The total population was used for the study because of its controllable size; and as a result, there was no sampling. The data for the study were gathered using a structured validated questionnaire tagged “Quality Assurance Mechanisms Questionnaire (QAMQ)” and “Employability Skills Questionnaire (ESQ)” which consisted of 50 questionnaire items. Mean scores were used to answer the research questions while Pearson Product Moment Correlation (PPMC) was used to test the null hypotheses of the study. The findings identified quality assurance mechanisms in terms of the admission process, infrastructural facilities and staff recruitment process as some of the mechanisms for promoting employability skills required of business education programmes in tertiary institutions in Kwara state. It was, therefore, recommended that the school authorities of Kwara State tertiary institutions should improve on quality assurance mechanisms that will enable students to develop required employability skills in the business education programme. This will assist graduates of business education to meet the expectations of employers of labour and reduce the rate of unemployment.

Keywords: *Quality assurance mechanisms, employability skills, business education programme, tertiary institutions.*

Introduction

The massive growth and access to higher education in this era calls for quality assurance, and the consequence that globalization has brought on education demands serious attention. Higher education is perceived as the engine that drives the economy through the provision of necessary skills and knowledge used to develop income-generating activities. Education has been regarded as a powerful instrument for reducing poverty and inequality as well as helping to lay the foundation for sustained economic growth. Quality assurance is the systematic monitoring and evaluation of the various aspects of the educational system to maximize the probability that quality standards are being attained by the production process (teaching and learning). This is to ensure that the qualities of graduates' turnout after graduation are employable. Quality in higher education has become a major issue as a result of globalization and this has affected academics in all ramifications. Quality assurance in higher education entails the ability of the institutions to meet the expectations of the users of manpower in connection to the quality of skills acquired by their outputs to meet the expected standard. Also, any educational programme that lacks essential school plants and facilities cannot reasonably expect to achieve its main objective (Ubulom and Enyekit 2017).

Tertiary institutions are expected to put quality assurance mechanisms in place as a way of assuring government, the National Accreditation Board (NAB), parents and other stakeholders about the high standards of their programmes and their achievement through outcome also as a means of ensuring that educational aims are being achieved (Boateng et al., 2015 & Oniyide, & Sulyman (2020). They explained further that the major function of quality assurance units and departments in tertiary institutions is to monitor performance as well as to ensure the achievement of quality outputs. Woodhouse (2013) opined that quality assurance relates to a number of stakeholders in higher education which include students, institutions, employers, governments, and society. In this manner, students want to know which institution to choose; institutions want confirmation of their standing; employers want to know that graduates can hit the ground running; governments want to know that their money is well spent and sometimes requires external quality agencies to drive institutions in particular directions; society wants a prestigious local institution; all want quality assurance decisions and outputs that are intelligible and useful. Also, Igborgbor in Okoli et al. (2018) saw quality assurance as all the measures taken to ensure that the educational system is better able to meet the needs of each society. Quality education is conceived as adequate provision of the needs of learners and teachers in terms of adequate equipment and facilities, funds, resources, e-library, books, conducive and suitable teaching and learning environment, sufficient staff quarters and classrooms in schools, staffing to mention but few for effective and efficient teaching and learning to take place. Quality assurance is a mechanism put in place to maintain the degree of excellence on educational processes of tests or fitters to ensure that such products or services have attained the threshold (Emenalo, 2020).

The tertiary institutions must see that the business education programme of study can cater for the needs of their students. For example, they must see that the curriculum was embedded with the required skills that will enable the students to cope with the current



challenges in the world of work. In the employability discourse, the world of work is represented in a highly sanitized and rational way. Employability of graduates should be the ultimate goal of any higher institution. In quality assurance (external and internal), attention should be paid to the extent to which the envisioned programme learning outcomes are attained and if the requirements are in line with the requirements of the labour market (input phase). True internal quality assurance tools and mechanisms that are related to employability can be monitored during the students' study careers. Student advancement schemes are important to equip the students to meet the various challenges in their careers. Assessment programmes like Certificate Courses are offered to the students to bridge the gap between the syllabus of the tertiary and industrial requirements, regular visits and industrial-institutional collaborations to get practical experience about the operations of the organization (Aithal, 2015). Business education programme is a productive and functional form of education which leads itself to self-employment, self-reliance and accordingly self-actualization (Ezeani in Sokyee et.al 2018). This implies students' ability to acquire basic training or knowledge related to their career and performs effectively in order to meet the current challenges in the labour market.

Mechanism is a plan of action designed to achieve long term or overall goal and objectives of a certain programme. In an educational context, mechanism is a process of using quality materials to deliver instructions to the learners that will bring about quality output to achieve the set goals of education (Ikuelogbon et. al., 2020). Quality assurance mechanism in business education is the systematic way of evaluating the educational content put together to meet the needs of business education graduates so as to cope with current challenges. The fundamental purpose of the business education programme is to produce competent, skilled and dynamic students', office administrators, business persons, and women that will effectively compete favourably in the field of work. Quality assurance in business education entails the ability of the institutions to meet up with the expectations of the users of manpower concerning the quality of skills acquired by their outputs. Quality of business education programme is a necessity to yield the expected results and also for stated objectives to be achieved. Also, Okebukola (2010) affirmed that the quality of education is equal to the quality of teachers. However, quality assurance is influenced by several factors including lecturers' income levels, academic qualification, teaching experience, job satisfaction, career achievement, students' learning needs, students' knowledge and experience (Okeke 2019).

According to Edokpolor and Owenvbiogie (2017), business education is a programme of instruction that proffers various skills in marketing, accounting and office technology and management. Umoru (2015) stated that business education is an academic programme whose aim is to equip the learners with an understanding of value, knowledge, business and technical skills that are essential to the world of work and teaching students business-related subjects. It is glaring that business education is the type of education that prepares and equips the students with employability skills needed to be self-reliant or for gainful employment. To cap it all, quality output in higher institutions can be associated with employability. These skills will serve as means of survival for business education graduates after completion of their programme.

Employability is the ability gained from knowledge-based skills and experiences for enhancing and securing specified employment. This is the skill developed by students during their course of study in tertiary institutions. Boateng et al. (2015) affirmed that graduate employability involves a set of achievements (skills, understanding and personal attribute) that make individuals more likely to gain employment and be fulfilled in their chosen occupations. To Ademiluyi (2019), employability skills refer to a group of important skills instilled in each individual to be a member of a productive workforce. This implies that, is a set of skills instilled in students before graduation in order to meet the challenges in the world of work.

Therefore, employability is a de-contextualized signifier that pays no attention to how social structures such as gender, race, social class and disability interact with labour market opportunities. Employability describes and portrays the degrees to which people are trained and educated to make use of their capacities, with which they can attain and secure employment. Employability also is a reflection of the context or environment of the employers, and of the work environment they have created (i.e. the degree to which personal development and learning are stimulated and facilitated). However, most factors for employability relate to the individual. Individual factors associated with employability are competencies, attitudes and availability.

According to Tang (2019), employability skills refer to the skills that are required to sustain, and do well on a job. This implies that employability skills are the attributes required by employers to address the current changes in the work environment. The employability skills which business education equips students with include: critical thinking skills, Information and Communication Technology skills (ICT), analytical thinking skills, time management skills, teamwork skills, problem-solving skills, communication skills, and human relation/interpersonal skills. Robles in Sohel (2019) identified the top ten soft skills employers want. They include honesty, social skills, communication, courteousness, positive attitude, professionalism, flexibility, teamwork, responsibility, and work ethic. The author observed that business executives considered soft skills to be important attributes in job applicants and noted that efforts to develop soft skills should be viewed as an investment. In a nutshell, these skills have to do with individual attributes in adapting to changes that occur in the world of work.

Employability skills are generating innovations in course design and delivery in many ways. These involve areas such as work-based learning, entrepreneurship, and business start-ups, and the resulting changes need to be evaluated and their impacts assessed. Good mechanisms need to be identified and shared within and across subjects and professional fields. Consequently, student employability should form a central part of quality assurance agendas within institutions of higher education. However, for Business Education to attain its stated goals, an appropriate mechanism to promote quality assurance in business education must be put in place. These will ensure the production of quality graduates for the world of work (Okoli et al., 2018).

Proper funding, effective quality control (to enforce standard), conducive and appropriate teaching and learning environment, sufficient staff quarters and classrooms in schools, adequate and proper equipment, staffing, good quality and well-motivated staff

truly committed to undiluted scholarship are essential mechanisms for promoting quality business education programme (Thom-otuya & Inko-tariah 2016). To cap it all, ensuring optimum quality assurance in the business education programme these indices are essential. Thus, the study is aimed at eliciting quality assurance mechanisms for promoting employability skills required in the business education programme in Kwara State tertiary institutions.

Statement of the Problem

One of the purposes of higher education is to maintain standards, excellence in learning and maintenance of the institution's reputation in the global marketplace. A key performance indicator of any educational institution is quality education most especially in the teaching and learning environment. The national educational objectives, according to the Federal Republic of Nigeria (FRN, 2013) include the acquisition of appropriate skills, abilities and competencies both mental and physical, considered valuable for all Nigerians to live and contribute meaningfully to the growth of the economy. The acquisition of employability skills for students of higher institutions is therefore paramount.

Business education students are expected to attain the competency level and skills that meet the specified requirements of employers. Examples of such skills are basic communication skills, critical thinking skills, analytical thinking skills, technological skills, problem-solving skills, team working skills, decision-making skills to mention a few. This mismatch, coupled with under-training in critical skills, problem-solving skills, analytical thinking skills and communication is blamed, at least in part, for the emerging high graduate unemployment and under-employment in many parts of Africa (Association of African Universities, 2012 Report). The quality of education imparted to the students in terms of content and context, curriculum, the programme of study, the quality of the personnel involved should be the type that will enable them to function effectively after graduation. Therefore, investing on quality education to match the competencies with the demand of the work assignments is necessary.

Purpose of the Study

The main purpose of the study is to examine the quality assurance mechanisms for promoting employability skills required in the business education programmes in tertiary institutions in Kwara State. Specifically, the study sought to:

1. investigated the quality of admission process mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State.
2. examined the quality of infrastructural facilities mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State.

3. determined the quality of staff recruitment mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State.

Research Questions

The following are the research questions that guided the study.

1. What are the quality admission process mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State?
2. What are the quality infrastructural facilities mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State?
3. What are the quality staff recruitment mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State?

Hypotheses

The following hypotheses were tested and formulated at a 0.05 level of significance:

- H01:** There is no significant relationship between the quality admission process and employability skills in Kwara State, Nigeria.
- H02:** There is no significant relationship between infrastructural facilities and employability skills in Kwara State, Nigeria.
- H03:** There is no significant relationship between the staff recruitment process and employability skills in Kwara State, Nigeria.

Methodology

The study covered all tertiary institutions in Kwara State of Nigeria. Specifically, the study purposefully focused on the institutions offering business education courses in Kwara State. These institutions include the University of Ilorin; Kwara State University Malete; Federal Polytechnic; Offa, Kwara State Polytechnic Ilorin; College of Education Ilorin, College of Education, Oro and College of Education (Technical), Lafiaji. Descriptive survey design of correlation was adopted for the study. The population for the study comprised 56 business education lecturers in the seven institutions. The whole population was used for the study because of its controllable size; hence, there was no need for sampling. The data for the study were gathered using two structured questionnaires tagged “Quality Assurance Mechanisms Questionnaire (QAMQ)” and “Employability Skills Questionnaire (ESQ)”. Four-point rating scale of Strongly Agree (SA) 4 points, Agree (A) 3 points, Disagree (D) 2 points and Strongly Disagree (SD) 1 point was used. The questionnaire was validated by two experts in Business Education and Measurement and Evaluation in Kwara State University, Malete and the University of Ilorin respectively. The internal consistency was determined using the Cronbach Alpha procedure with a reliability index of 0.913 and 0.925 respectively. After a proper briefing on the purpose of the study, copies of the questionnaires were administered and collected by the researchers with the help of three research assistants. The copies of the instruments were administered via face-to-face and online (Google survey form) approaches. A total of 32 (57.14%) were

retrieved and found usable out of 56 target populations. Data collected were analysed using Pearson Product Moment Correlation (PPMC) to test the hypotheses.

Results

Research Question 1:

What are the quality admission process mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State?

Table1: Mean Responses and Standard Deviations on quality admission process mechanism for promoting employability skills in business education programme in tertiary institutions in Kwara State.

S/N	Items on Admission Process Mechanism	Mean	SD	Remark
1.	Entrance examination is properly conducted in my institution.	3.00	0.718	Agreed
2.	Admission selection guidelines are strictly adhered to	3.03	0.595	Agreed
3.	This institution strictly adheres to the admission requirements for programmes in the course of the admission process	3.06	0.504	Agreed
4.	Entrance examination questions are set by qualified specialists	3.06	0.716	Agreed
5.	Lecturers are involved in the invigilation of entrance examination	2.88	0.660	Agreed
6.	Effective ways of identifying impersonators are always put in place	2.94	0.619	Agreed
7.	Entry examination results are properly monitored	2.69	0.592	Agreed
8.	O' Level results are verified before admission is granted	3.13	0.660	Agreed
9.	Admission is based only on merit	2.87	0.793	Agreed
Weighted Average		2.96		

Table 1 above showed the responses of teachers on quality admission process mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State. The result of the analysis revealed that teachers agreed on the admission process mechanism outlined. The weighted mean of the quality admission process is 2.96. O' Level results are verified before admission is granted was rated high with a mean score of 3.13. It was also observed from the values of the standard deviations that there was a close range in the responses of the teachers.

Research Question 2:

What are the quality infrastructural facilities mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State?

Table 2: Mean Responses and Standard Deviations on qualities of infrastructural facilities mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State.

S/N	Items on qualities of infrastructural facilities	Mean	SD	
Remark				
1.	There are adequate laboratories, studios, typing pool and workshops in my institution	2.62	0.707	Agreed
2.	Laboratories/studios/typing pools equipment are regularly maintained	2.50	0.718	Agreed
3.	Classrooms are adequately provided in this institution	2.75	0.622	Agreed
4.	This institution provides functional internet service to facilitate learning activities	2.38	0.660	Agreed
5.	Students have access to facilities that promote learning in this institution	2.62	0.707	Agreed
6.	Walkway in my institution promotes easy access to the lecture hall and other educational facilities	2.81	0.693	Agreed
7.	There are adequate workshops in my institutions	2.47	0.507	Agreed
8.	Departmental/institution library facility in my school is spacious enough to accommodate a sizable number of students	2.88	0.707	Agreed
9.	My school library is adequately stocked with relevant educational resources for teaching and learning	2.78	0.751	Agreed
10.	My school hostel is furnished and habitable for use	2.59	0.756	Agreed
Weighted Average		2.64		

Table 2 above showed the responses of teachers on qualities of infrastructural facilities mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State. The outcome of the analysis revealed that teachers agreed that the outlined infrastructural facilities mechanisms would promote employability skills in business education programmes in tertiary institutions in Kwara State. The weighted mean of the qualities of infrastructural facilities is 2.64. The departmental/institution library facility in my school is spacious enough to accommodate

a sizable number of students was therefore rated high with a mean score of 2.88. The values of the standard deviations showed a close range in the responses of the teachers.

Research Question 3:

What are the quality staff recruitment mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State?

Table 3: Mean Responses and Standard Deviations on qualities of staff recruitment mechanisms for promoting employability skills in business education programmes in tertiary institutions in Kwara State.

S/N	Items on qualities of staff recruitment	Mean	SD
	Remark		
1.	Written interviews are conducted before appointment of staff	2.59	0.712 Agreed
2.	Oral interview is conducted before appointment of staff	3.22	0.420 Agreed
3.	Recruitment of staff is done based on departmental request	2.72	0.683 Agreed
4.	Recruited staff are evenly distributed based on quota system	2.28	0.634 Agreed
5.	Orientation exercise is conducted for newly employed staff	2.94	0.669 Agreed
6.	Recruitment of staff is done based on merit	2.72	0.729 Agreed
7.	Academic staff are recruited based on teaching experience	2.91	0.588 Agreed
8.	Recruitment of staff is based on relevant qualifications	3.00	0.568 Agreed
9.	Staff are placed on merit positions	2.75	0.762 Agreed
10.	Recruitment of staff followed due process	2.84	0.574 Agreed
Weighted Summary		2.80	

From table 2 above, the results of the analysis revealed that teachers agreed that the staff recruitment mechanisms outlined above would promote employability skills in business education programmes in tertiary institutions in Kwara State. The weighted mean of the staff recruitment mechanisms is 2.80. An oral interview is conducted before the appointment of staff was rated high with a mean score of 3.22. Table 3 also showed that there was a close range in the responses of the teachers as observed from the values of the standard deviations.

Testing of Hypotheses**Hypothesis 1:**

H0₁: There is no significant relationship between the quality admission process and employability skills in Kwara State, Nigeria

Table 4: Quality of Admission Processes and Employability Skills in Kwara State

Variables	N	R	p-Value	Decision
Quality of admission processes	32			
Employability Skills	32	.656**	.000	H0₂ Rejected

***Significant $p < 0.05$**

Table 4 indicates that the Pearson correlation analysis value yielded $r = 0.656$ which is positive relationship with p-value $.000 < 0.05$. This shows a positive significant relationship result. Therefore, the hypothesis is rejected. By implication, quality of admission process will positively and significantly enhance the employability skills required of business education graduates of these institutions in Kwara State, Nigeria.

Hypothesis 2:

H0₂: There is no significant relationship between infrastructural facilities and employability skills in Kwara State, Nigeria.

Table 5: Infrastructural facilities and Employability Skills in Kwara State

Variables	N	R	p-Value	Decision
Infrastructural Facilities	32			
Employability Skills	32	.406*	.021	H0₃ Rejected

***Significant $p < 0.05$**

Table 5 indicates that the Pearson correlation analysis value yielded $r = 0.406$ which is a positive relationship with the p-value $.021 < 0.05$. This reveals a positive significant correlation result. Therefore, the hypothesis is rejected. This implies that the quality of infrastructural facilities will positively and significantly enhance the employability skills required of business education graduates of these institutions in Kwara State, Nigeria.

Hypothesis 3:

H0₃: There is no significant relationship between the staff recruitment process and employability skills

Table 6: Staff Recruitment Process and Employability Skills in Kwara State

Variables	N	R	p-Value	Decision
Staff Recruitment Process	32	.440*	.012	Ho4 Rejected
Employability Skills	32			

***Significant $p < 0.05$**

In Table 6, the Pearson correlation analysis value yielded a positive relationship at $r = 0.440$ with $p\text{-value } .000 < 0.05$. This shows a positive significant correlation result. Therefore, the hypothesis is rejected. This implies that the quality staff recruitment process will positively and significantly enhance the employability skills required of business education graduates of these institutions in Kwara State.

Discussion of Findings

The study revealed that there was a significant connection between the quality admission process and employability skills as revealed in hypothesis two. This connotes that the quality admission process contributes significantly to the acquisition of employability skills in tertiary institutions. This is in line with the finding of Oniyide and Sulyman (2020) who found that there was a significant relationship between NBTE accreditation roles and quality assurance in public polytechnics in South West, Nigeria. They believed that quality assurance is a way of ensuring that educational aims are appropriate and are being achieved.

The findings of hypothesis two revealed that infrastructural facilities have a significant relationship with employability skills. This implies that sufficient provision of infrastructural amenities is a necessity for quality teaching and learning. The outcome of this study also agrees with Ubulom and Enyekit (2017) who in their study on evaluation of facilities utilized for the implementation of business education programmes in tertiary institutions in Rivers State found that any educational programme that lacks essential school plants and facilities cannot reasonably expect to achieve its main objective. This implies that facilities such as essential amenities, structures, equipment, fittings, and school materials are important in boosting students' learning.

Finally, the hypothesis tested in Table 6 revealed that there was a significant relationship between the quality staff recruitment process and employability skills. This finding is in line with Okebukola (2010) who found that the quality of education is equal to the quality of teachers. This remark suggests that recruitment of staff is one key mechanism of promoting employability skills in tertiary institutions. This will bring about transferring the right skills to the graduates while in school. Also, the result is in acquiescence with Okeke (2019) who revealed that quality assurance is influenced by several factors including lecturers' income levels, academic qualification, teaching experience, job satisfaction, career achievement, students' learning needs, students' knowledge and experience. For business education to achieve its stated goals, an

appropriate mechanism to promote quality assurance in business education must be put in place. These will ensure the production of quality graduates for the world of work (Okoli et al., 2018). Also, proper funding, effective quality control (to enforce standard), conducive and appropriate teaching and learning environment, sufficient staff quarters and classrooms in schools, adequate and proper equipment, staffing, good quality and well-motivated staff truly committed to undiluted scholarship are essential mechanisms for promoting quality business education programme (Thom-otuya & Inko-tariah 2016).

Conclusion

The study investigated quality assurance mechanisms for promoting employability skills required of the business education programme in Kwara State tertiary institutions. The result showed that quality admission process mechanisms, infrastructural facilities mechanisms, staff recruitment processes are critical to the acquisition of employability skills of business education programmes. Sequel to this, it could be asserted that good quality assurance mechanisms put in place will bring about effective acquisition of employability skills by business education graduates for self-reliance or gainful employment.

A cursory look at the educational system and business education programme shows quality and employability skills are of necessity for students to meet the needs of the labour market. Also, the acquisition of these skills will bridge the gaps that exist between employers and employees in the world of work.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The school authorities of Kwara State tertiary institutions should improve on quality assurance mechanisms that will enable students to build up required employability skills in the business education programme. This will assist graduates of business education to meet the expectations of employers of labour and reduce the rate of unemployment.
2. There should be adequate monitoring of admission of students by following due process to make it transparent.
3. Infrastructural facilities such as ICT rooms, model offices, up-to-date classrooms, laboratories and the likes should be sufficient and to enhance effective teaching and learning which will consequently lead to the achievement of employability skills necessary for business education students.
4. The entry point of all tertiary institution staff must undergo a meritocratic process. The lecturers should be properly screened before being employed.



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PERCEIVED CHALLENGES FACED BY TEACHERS USING DIGITAL LEARNING TO TEACH STUDENTS WITH DISABILITIES DURING COVID-19 PANDEMIC IN ILORIN METROPOLIS

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Abstract

The study examined perceived challenges faced by teachers using digital learning to teach students with disabilities during COVID-19 Pandemic in Ilorin Metropolis. Qualitative research was adopted; hence qualitative technique was used in addressing the research questions. The respondents were twenty-five teachers teaching students with disabilities in Special schools in Ilorin metropolis; they were purposefully selected for the study. The focus group discussion guide was designed by the researchers and was made up of three open-ended questions. The respondents were grouped into three groups; thereafter, focus group discussion was conducted with them. One research question was generated. The qualitative data gathered were transcribed and analysed using content analysis to determine the relevant themes.

The finding of the study revealed that teachers encountered a lot of challenges when using digital learning to teach students with disabilities, the major challenges were inadequate knowledge on the use of compute (84.0%), difficulty in engaging students with disabilities (80.0%) and lack of interest (76.0%).

Based on the finding it was concluded that teachers faced a lot of challenges when teaching students with disabilities using digital learning, these were lack of interest, difficulty engaging students to learning, poor internet, inadequate knowledge on the use of computer. These challenges have contributed negatively to teaching and learning using digital learning. It was recommended that government should provide training for teachers on the use of digital learning so as to facilitate teaching and learning of students with disabilities and students with disabilities should be encouraged to know the important of digital learning; this will enhance their interest in online learning.

Keywords: Students with disabilities, Covid-19 Pandemic and Challenges

Introduction

Education of students with disabilities has embraced lots of positive changes over decades; one of those changes is an inclusive practice for all categories of special needs individuals. Inclusive education is the new trend in the education of students with any form of disability and it came as a result of SALAMACA proposition; inclusive education is the process of teaching students with disabilities alongside students without disabilities in the same school setting. Inclusive Education refers to when all students, regardless of any challenges they may have, are placed in age-appropriate general education classes that are in their own neighborhood schools to receive high-quality instructions, interventions, and supports that enable them to meet success in the core curriculum (Bui, Quirk, Almazan, & Valenti, 2010; Alquraini & Gut, 2012). Successful inclusive education happens primarily through accepting, understanding, and attending to student differences and diversity, which can include physical, cognitive, academic, social, and emotional.

The outbreak of Corona virus pandemic ushered a new era to all sectors including the teaching and learning process in Nigeria and the whole world at large. Precisely, the Director General of the World Health Organization (WHO) declared Corona virus Disease otherwise called (COVID-19) in 2019 on 30th January, 2020 a Public Health Emergency of International Concern (PHEIC). The first case of the scourge was thereafter announced on 27th February, 2020 by the Federal Ministry of Health in Lagos State, Nigeria. This called for proactive steps by all and sundry most especially in the health sectors. Day by day, the unprecedented increase in number of affected persons and the death rolls kept increasing at alarming rate. The Federal Ministry of Health announced that the Multi-Sectoral Corona virus Preparedness Group led by the Nigeria Center for Disease and Control (NCDC) swung into action by preventing the further spread of the pandemic. Consequent upon this, the Federal Ministry of Education granted the closure of all schools on March 19th, 2020. This approval was followed by all states in Nigeria.

School closures in the United States of America affected over 60 million students in the country. In Spain, about 11 million students were affected by school closure for the increase cases of Covid-19. As reported by Edeh, Faith, Shuvro and Aabha (2020) many schools were closed down and scheduled tests and examinations were also cancelled in the United State. Australia reported that dozens of independent schools were shut down at New South Wales while some moved to online classes (Michael, 2020).

In Nigeria, public gatherings were restricted and with utmost Covid-19 preventive measures if it was a necessary gathering, approved number of people were expected to assemble at the meeting point. Public places like government parastatals, banks, cooperate organizations were under lock and key in the main time. Consequently, schools were shut down to curb the further spread of the virus among school-aged learners. During this period, students were made to sit at homes. Some schools came out with what they called alternative to face-to-face reaching and learning. Hence, many students were subjected to sharing mobile phones with their parents or elders for those who are not mature to posses such mobile phone. To make the online teaching and learning more participatory and interesting, more pedagogical, diverse social media and/or online class sections were created to ensure that students were kept productively engaged while at homes.

Pacheco (2020), revealed that digital learning became a “new normal” way of teaching and learning process in schools. This process affected the regular teaching and learning process of both students with disability and those without disability. Some measures need to be put into consideration for a child with disability to enhance learning and acquire good grades must be put in place (McGhee, et. al. 2002,) It was therefore suggested by Moores (2011), that for a significant record progress in school for students with disabilities, curriculum should be well structured and designed to cater for their needs and interest.

By and large, the educational effects of Covid-19 on education cannot be looked into in a single research work. One of the affected populations was students with special needs and the teachers/facilitators of this category of learners. Some of the available modes of online teaching and learning as alternative to face-to-face teaching and learning as pointed out by Edeh et al (2020). Most of online teaching is not disability friendly and this is capable in putting teachers of special needs learners more in herculean tasks. During this period, virtually all special needs students were left untreated or unattended to. The reason is not farfetched, as the globe did not prepare for such a scourge. The challenges and problems faced by teachers vary depending on students’ ability to operate technology in order to access online sites and make use of the computers. This is an evident that makes some students do not have the required knowledge necessary to participate in some online learning activities (Wedenoja, 2020). Rosalina (2020) researched on teachers’ challenges toward online learning in pandemic era, it was revealed that lack of interest, less communication and difficulty in engaging students were the major challenges faced by teaching when using online teaching. Based on previous studies, some challenges faced during the COVID-19 pandemic are not limited to poor internet network results in teachers and students frustration to teach and learn online, inadequate knowledge on the use of computers by some teachers and students, and there was no opportunity for students to experience teachers’ gesticulation and posture that can lead to better understanding of some teaching concepts (Afolabi, 2021). Besides that, digital learning, specifically online learning, may not give ample opportunities to involve students especially students with disabilities who need more interactions and hands-on activities to focus and learn compared to regular students. Thus one may say that the teachers experienced several digital learning challenges while teaching students with disabilities. This led to this study, which aimed at investigating the perceived challenges faced while teaching students with disabilities during the COVID-19 pandemic in Kwara State.

Statement of the problem

One of the biggest challenges facing students in general is the abrupt transition to online learning. Using technology to teach and support students with disabilities is not new to special education teachers, however, the recent abrupt transition to distance learning goes far outside the typical use of technology, as teachers are not physically able to support and engage students with the technology. Managing digital learning is difficult but managing digital learning for two or more children who have special needs is much harder. Teachers in the regular classroom were faced with several challenges during the digital

leaning; it was a double challenge for teachers teaching students with disabilities. This therefore prompted the researchers to investigate the challenges faced when teaching students with disabilities during the COVID-19 period.

Research Question

1. What are the challenges faced by teachers using digital learning to teach students with disability during COVID- 19 Pandemic in Ilorin Metropolis?

Methodology

The study adopted qualitative research; this was used in addressing the research questions. The methodology involved the examination of the opinion of respondents on the challenges faced while using digital learning to teach students with disability during the COVID-19 pandemic. A qualitative design was appropriate for the study because real responses will be gotten directly from the respondents. The population of the study comprises all teachers teaching students with Special needs in Ilorin Metropolis in Kwara State. A total sample of 25 teachers teaching students with special needs was drawn using purposeful sampling technique. The respondents were grouped into three groups; subsequently, focus group discussion was conducted with them. The focus group discussion guide was designed by the researchers and was made up of three open-ended questions. The questions were meant to elicit information on the perceived challenge faced by teachers using digital learning to teach students with disabilities during COVID 19 Pandemic. The focus group discussion was conducted face-to-face, English language was the mean of communication for the discussion. Ethical considerations such as informed consent, voluntary participation and confidentiality were considered. The data from the focus group discussion was audio-taped on the permission of the respondents and it lasted for three hours. To ensure both face and content validity of the instrument, the focus group guide was validated by two experts, the reason for this was to ensure that focus group questions measure accurately and consistently what they were supposed to measure. The qualitative data gathered were transcribed and analysed using content analysis based on the relevant themes.

Result

The analyses of data gathered are presented under relevant headings as follows:
Researcher question: what are the challenges faced by teachers using digital learning to teach students with disability during COVID- 19 pandemic.

The respondents were asked what are the challenges faced when using digital learning to teach students with disability during COVID-19 pandemic. On the challenges faced by teachers using digital learning to teach students with disability during COVID- 19 Pandemic, the respondents started that they face a lot of challenges using digital learning to teach students with disability. Therefore, three themes were identified from their responses.

Theme 1: Inadequate knowledge on the use of computer

The theme was inadequate knowledge on the use of computer. Twenty-one respondents representing 84% stated that inadequate knowledge on the use of computer among the teachers teaching students with disabilities while only four respondents representing 16% opined that lack of from the students with disabilities was the major challenge faced during digital learning. This means that inadequate knowledge of computer was the major challenge faced by teachers using digital learning to teach students with disabilities.

Theme 2: Lack of interest

Lack of interest was another theme identified by the respondents. Seventeen respondents representing 76.0% said that another challenge face during digital learning was lack of interest in using internet. They stated that majority of students with disabilities did not want to learning that is they showed no interest in learning when it comes to online learning.

Theme 3: Difficulty in engaging students.

Another theme identified as one of the challenges faced by teachers using digital learning with disability during COVID- 19 Pandemic was difficulty in engaging students with disabilities. Twenty respondents representing 80.0% said that difficulty in engaging students with disability during digital teaching was a major challenge. They further explained that students with disabilities are difficult to engage during digital teaching.

Discussion of Findings

The study examined the challenges faced by teachers using digital learning to teach students with disability during COVID- 19 Pandemic. It was revealed during focus group discussion that majority of teachers faced numerous challenges during digital learning to teach students with disabilities among these are: inadequate knowledge on the use of computer, lack of interest and difficulty in engaging students with disabilities. The reason for these findings could be that teachers have experienced those challenges directly during the course of teaching of students with disability. This finding is in line with the finding of Rosalina (2020) who found out that lack of interest, difficulty in engaging students during digital learning with students with disabilities was one of the major challenges being faced by teachers. Afolabi (2021) found out that some challenges faced during the COVID-19 pandemic are not limited to poor internet network results in teachers and student frustration to teach and learn online but inadequate knowledge on the use of computers by some teachers and students, and there was no opportunity for students to experience teachers' gesticulation and posture that can lead to better understanding of some teaching concepts.

Recommendations

Based on the finding of the study, it was recommended that:

1. Government should provide training for teachers on the use of digital learning so as to facilitate teaching and learning of students with disabilities.

2. Students with disabilities should be encouraged to know the important of digital learning; this will enhance their interests in learning through online.

Conclusion

It was concluded that teachers faced a lot of challenges when teaching students with disabilities using digital learning, to mention a few lack of interest, difficulty engaging students to learning, poor internet, inadequate knowledge on the use of computer. These challenges have contributed negatively to teaching and learning using digital learning.

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TECHNOLOGICAL SKILLS NEEDED FOR MOVING FROM ON-GROUND TO ONLINE TEACHING AND LEARNING OF OTM COURSES IN POLYTECHNICS

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Abstract

This paper was on technological skills needed for moving from on-ground to online teaching and learning of OTM courses in Polytechnics. The study had one specific purposes, research questions and hypotheses. The study adopted descriptive survey research design for the study. Population of the study was 1167 comprising 79 lecturers and 1088 students both male and female respectively. A total sample of 323 respondents comprising lecturers and HND students was selected for the study. The instrument for data collection was a structured questionnaire tagged Technological Skills needed for moving from on-ground to Online Teaching and Learning Questionnaire (TSMOOTLQ), with 4points rating scale. The instruments went through face and content validation by three experts. The reliability of the instrument was ensured using the Split-half method and the result yielded a reliability coefficient of 0.87. Three hundred and twenty three copies of the questionnaire were administered. Only two hundred and seventy were retrieved and used for the study. Mean and standard deviation were used to analyze the data collected to answer the research questions. The hypotheses were tested using independent sample t-test at 0.05 level of significance. The study found among others that if lecturers possess adequate technological skills it will facilitate easy moving from on-ground to online teaching and learning of OTM courses. The skills would afford the lecturers and the students' ability to be able to navigate successfully in online environment. Based on the findings, conclusion was made that possession of these technology skills will enhance effective interaction of lecturers and students in online environment. The following were recommended among others that there is the need for OTM lecturers to expose themselves to adequate and relevant technological skills which will enhance their ability to perform successfully in online environment.

Keywords: *Technological skills, On-ground, Online, Teaching and Learning, OTM courses*

Introduction

Innovation in technology has influenced all facets of human endeavour including education. The internet has made education no longer limited to the four walls of school classrooms (Ezeabii, Ile, & Ezugwu, 2019). This modern technology has launched the world into a knowledge based economy in which ideas and technological principles are used for better output (Mbah, 2016). Thus, advancement in technology according to Muhammed, Sua and Munnaza (2015) has compelled teachers and educators to utilize its benefits for the delivery of instruction and hence promote knowledge through online learning.

According to Ajayi and Ekundayo (2009), teaching and learning have gone beyond the teacher standing before a group of students and disseminating information to them

without the students' adequate participation. He posited that with the aid of technology, teachers can take students beyond traditional limits, ensure their adequate participation in teaching and learning processes and create vital environments to experiment and explore. Any teacher with adequate and professional skills in technology utilization will definitely have his students perform better in classroom and online learning. Tony-Okeme (2015) suggested that professional training is necessary for teachers to enable them teach effectively with the use of new technology.

Hence, for successful moving from on-ground to online teaching and learning, it requires adequate technological skills and competences of lecturers and students. These skills are the abilities to be able to navigate effectively through online learning environment with the use of communication and internet technologies. The rapid with which scientific inventions and innovation grow has forced teachers to seek and acquire new skills and competences to keep up with time (Ndinechi & Ementa, 2013). Thus, global citizens in the information age should be equipped with the technology literacy skills needed to overcome digital divides and inequalities (Cohron, 2015).

Technological skills are required knowledge and expertise needed in online education by both teachers and students. Technology skill has to do with abilities, experiences and technical knowhow to be able to operate many devices, machines, perform and navigate through many information technology platforms in an online environment. Alan (2019) referred to technology skills as the ability to perform tasks that require the use of certain tools, whether tangible or intangible, and the technology required to master their intended uses in a variety of scenarios. Technology skills in this context usually refer to an individual who possesses the knowledge and expertise to use related devices and online platforms to perform and operate successfully in online environment. In online environment given the growth of technology within worldwide and local economies, and especially in education the need for diverse technical skills and knowledge is likely to continue to grow into the foreseeable future. Alan (2019) explained that technology skills include an array of knowledge on topics that include computing abilities, word processing skills, spreadsheets skills, database skills, electronic presentation skills, web navigation

skills, web site design skills, internet and e-mail management skills, digital cameras, computer network knowledge, file management and windows explorer skills, downloading software from the web (knowledge including ebooks), installing computer software onto a computer system, WebCT or blackboard teaching skills, videoconferencing skills, computer-related storage devices knowledge for example (disks, Cds, USB drives, zip disks, Dvds, etc.), scanner knowledge, knowledge of Pdas, deep web knowledge, educational copyright knowledge and computer security knowledge. Technology skills are often required to operate machinery, tools, software, and coding. They are usually very practical and demand in-depth training. Adefisayo (2010) reported that to facilitate better performance, the teacher should always equip himself with necessary facts, skills and must try to enrich himself with new knowledge and ideas.

Technological knowledge (TK) denotes teacher's knowledge about technology and how it can be effectively used to deliver the curriculum. Technological skills are basic computer and internet related knowledge that must be possessed by teachers and students both in online and on site teaching and learning environment. It is a skill that will make them to interact effectively and collaborate efficiently in order to make teaching and learning enjoyable and achievable. It is surprised that many educators lack the basic computer skills and basic skills to navigate their way through the Internet. This is because many veteran teachers are not used to technology in the classroom talk less of using it to teach online. Hence, these skills that many think every teacher should know might be absent. These are the skills that our students will need in order to survive in the world of work. This is because as computer and associated technologies continue to change and evolve, educators must continue to strive for excellence in their work. They must continue to keep up with time and effort to maintain and improve their technology skills. While this list may seem basic to some, these are the skills that will help to propel students into the future.

The multimodal nature of online learning and virtual spaces means that teachers need to change as they can no longer rely upon sensory and expressive skills to establish and maintain relationships with students (Major, 2010). This implied that teachers are expected to develop strong technological skills for successful online learning. Debbie (2015) opined that technology skills are fundamental; they enhance the instructor's ability to connect with students in online environment. With that in mind, Debbie (2015) suggested the following list of technology skills that every teacher and student should know and possess. The skills include:- basic computer and internet skills such as basic computer hardware and software; ability to perform computer operations, such as using keyboard and mouse, Managing files and folders: save, name, copy, move, backup, rename, delete, check properties. Software installation, security and virus protection; Using software applications, such as Word, PowerPoint, Excel, email clients; Knowledge of copy and paste, spell-checking, saving files in different formats; Sending and downloading attachments. Internet search literacy skills is essential skill needed for school, work and life in general; such as connecting, accessing and using browsers, ability to perform online research using various search engines and library databases.

Ability to use online communication tools, such as email (create, send, receive, reply, prints, send/receive attachments), discussion boards (read, search, post, reply, follow threads), chats, and messengers. Other technology skills are proficiency with software applications: like installing/updating software and plug-ins, proficiency with features and functions within the LMS including uploading files, grading tools and grade book, LMS tools for asynchronous/synchronous communication, familiarity with platforms for communication/engagement outside of LMS, such as Pinterest, Twitter, Google+.

Furthermore, skills to connect on social media, collaborate with other educators' online, video conferencing and sharing videos, blogging, use of smart board, self-learning of technology, netiquette, use of information security and safety, back up, hardware basics and troubleshooting are important technology skills needed in teaching and learning online. **Nwokike and Joseph (2019) stated** that unfortunately, many business educators were trained with old technology. This poses a challenge to acquisition of technology skills by business educators (OTM inclusive) at all levels of education. As technologies continue to evolve, educators must continue to strive for excellence in the process of teaching and learning by upgrading their skills and imparting the required technological skills to their students. Nwokike and Joseph (2019) further noted with dismay that many business educators are resistant to technological changes. This was corroborated with the finding of Ukor, Agwazie and Ayemherire, (2014) that business educators almost never utilize modern e-learning tools in their teaching and learning encounters with their students.

Therefore, acquisition of technological skills as discussed above will give both the teachers and students enough experience to be able to interact, collaborate and navigate effectively in online environment. Adefisayo (2010) stated that to facilitate better performance, the teacher should always equip himself with necessary facts and must try to enrich himself with new knowledge and technological ideas as demanded in online learning. Hence acquisition of adequate technology skill is important to teachers and students for successful online teaching and learning of OTM courses. This will assist teacher to structure new pedagogy to develop socially active online classroom that encourages cooperation, interaction, and collaborative learning.

Statement of the problem

The state of affairs of teaching and learning of OTM courses in the polytechnics is that students and teachers have no access to online teaching/learning and experiences through global networks. Students therefore rely on what they are taught by teachers who are invariably relying more or less on outdated information recycled in documented printed materials like textbooks. Teachers do not have access to global data base because they are not exposed to and cannot make use of the modern information superhighway, the internet. Polytechnic lecturers in OTM, even in this era of information revolution made possible by Information and Communication Technology (ICT) are still relying on the massively adopted orthodox method of talk and chalk instructional delivery without realizing that the online learning and computer is fast becoming the chalkboard of tomorrow (Ima-Obong & Imoh-Obong, 2016).

This implies that OTM students in polytechnics continue to rely solely on their teachers and the available texts, and the instructional strategies continue to be teacher centered, while students remain passive learners. Apart from this, polytechnics have funding problems and there exists an opportunity to make more funds by moving from on-ground to online teaching and learning which has the capacity of greater students' enrolment; many of which are unable to participate in regular on-ground classes due to family obligations or work schedules. More enrolment means more funds for polytechnics especially, these days when institution owners such as government are not ready to adequately fund the institutions but are asking them to look inward to fund the schools in order to be autonomous through internally generated revenue (IGR). Also there is a policy of carrying capacity for polytechnics which limits the number of students that can be admitted in a particular year. With online teaching and learning there will be opportunity to generate more funds at relatively lower costs. However, the researcher observed that polytechnics are not making the most of the opportunity. This was as a result of insufficient technological skills to perform optimally in online environment. This factor may be inhibiting the polytechnics from tapping into this opportunity fully. Therefore the need to examine the technological skills needed for moving from on-ground to online teaching and learning of OTM courses in Polytechnics.

Research Question

In line with the study, one research question was raised to guide the study:

1. What are the technological skills needed for moving from on-ground to online teaching and learning of OTM courses in Polytechnics?

Research Hypothesis

One null hypothesis was formulated and tested at 0.05 level of significance.

1. There is no significant difference between the mean rating of students and lecturers on the technological skills needed for moving from on-ground to online teaching and learning of OTM courses in Polytechnics.

Methodology

The study adopted descriptive survey research design as the study sought the opinion of the respondents on technological skills needed for moving from on-ground to online teaching and learning of OTM courses. The population of the study comprises lecturers and HND students for 2020/2021 session in the department of Office Technology and Management of the eight Polytechnics used for the study. There is a total population of 1167 lecturers and HND students. The students sample is selected using Taro Yamane formula for finite population. The sample size is thus made up of 79 lecturers and 244 HND students.

The instrument for data collection was a structured questionnaire designed by the researcher which is tagged Technological Skills Needed for moving from On-ground to Online, Teaching and Learning Questionnaire (TSNMOOTLQ). The questionnaire was made up of 29 items on technological skills needed for moving from on-ground to online

teaching and learning. The items were placed on 4-point rating scale of Highly Needed (3.50-4.00), Moderately Needed (2.50-3.49), Fairly Needed (1.50-2.49), and Not Needed (0.0-1.49). The instrument was face validated by three senior lecturers from the Department of Business and Entrepreneurship Education, Kwara State University, Malete. Split-half method was used where the instrument was divided into two halves of odd and even numbers. The reliability of one half (odd) was determined using spearman Rank Correlation Coefficient. The reliability coefficient of the whole instrument was determined using Spearman Brown Prophecy formula. The reliability coefficient calculated was 0.87. The researcher, with the aid of research assistants, administer 323 copies of the questionnaire to the lecturers and students in the eight polytechnics that was used for the study. Out of these 270 copies of the questionnaires administered were collected and used. This gives about 83.59% return rate. Mean and standard deviation were used to analyze the data collected to answer the research question. Independent t-test was used to test the hypothesis.

Results

Research Question One: What are the technological skills needed for moving from on-ground to online teaching and learning of OTM courses in Polytechnics?

Table 1: Mean and standard deviation of responses on technological skills needed for moving from on-ground to online teaching and learning of OTM courses in Polytechnics

S/No	Item Statement	Mean	Std	Remark
1	Computer/ICT skill.	3.84	0.60	Highly Needed
2	Word Processing application package Proficiency.	3.70	0.61	Highly Needed
3	Spreadsheets/Ms Excel Skills.	3.56	0.76	Highly Needed
4	Database Skills.	3.56	0.77	Highly Needed
5	PowerPoint /Electronic Presentation Skills.	3.55	0.76	Highly Needed
6	Ability to search the Internet.	3.65	0.69	Highly Needed
7	Web Site Design Skills.	3.45	0.75	Moderately Needed
8	E-Mail Management Skills.	3.43	0.79	Moderately Needed
9	Webcam for video web conference presentation skills.	3.36	0.78	Moderately Needed
10	Computer Networking skills.	3.51	0.70	Highly Needed
11	Managing Files and folders Skills.	3.60	0.74	Highly Needed
12	Software downloading and uploading skills.	3.59	0.64	Highly Needed
13	Computer software installation and updating skills.	3.44	0.73	Moderately Needed
14	Smart board or Blackboard Teaching Skills.	3.23	0.84	Moderately Needed
15	Videoconferencing skills.	3.33	0.87	Moderately Needed

16	Computer Storage Devices Knowledge: (disks, CDs, USB drives, zip disks, DVDs).	3.58	0.72	Highly Needed
17	Scanner Knowledge skills.	3.41	0.81	Moderately Needed
18	Ability to record and upload video presentation.	3.43	0.81	Moderately Needed
19	Web Knowledge skills.	3.47	0.79	Moderately Needed
20	Educational Copyright Knowledge.	3.30	0.79	Moderately Needed
21	Computer Security Knowledge.	3.49	0.79	Moderately Needed
22	Proficiency with Learning Management System (LMS).	3.41	0.79	Moderately Needed
23	Knowledge to use communication tools of LMS, e.g. Pinterest, Twitter, social media, Google+.	3.45	0.82	Moderately Needed
24	Knowledge of synchronous communication.	3.39	2.65	Moderately Needed
25	Knowledge of asynchronous communication.	3.22	0.81	Moderately Needed
26	Knowledge of copy, cut, move and paste files in different formats.	3.63	0.69	Highly Needed
27	Ability to use online communication tools.	3.76	0.53	Highly Needed
28	Ability to spell-check and correct errors in different file.	3.66	0.66	Highly Needed
29	Ability to save files in different formats.	3.64	0.66	Highly Needed
Weighted Mean and Std		3.39	0.78	Moderately Needed

Source: Field Survey, 2021

Table 1 reveals that the respondents indicated that ability to operate computer (mean = 3.84), word processing application package proficiency (mean = 3.70), spreadsheets skills, (mean = 3.56), database skills (mean = 3.56), power point /electronic presentation skills (mean = 3.55), ability to search the internet (mean = 3.65), computer networking skills (mean = 3.51), managing files and folders skills (mean = 3.60), software downloading and uploading skills (mean = 3.59), computer storage devices knowledge such as disks, CDs, USB drives, zip disks, DVDs (mean = 3.58), ability to copy, cut, move and paste files in different formats (mean = 3.63), ability to use online communication tools (mean = 3.76), ability to spell-check and correct errors in different file (mean = 3.66) and ability to save files in different formats are highly needed technological skills for moving from on-ground to online teaching and learning of OTM courses in Polytechnics.

Table 1 also reveals that web site design skills is moderately needed (mean = 3.45), e-mail management skills (mean = 3.43), webcam for video web conference presentation skills (mean = 3.36), computer software installation and updating skills (mean = 3.44) and smart board or blackboard teaching skills (mean = 3.23) are moderately needed skills. Table one also shows that the following skills are moderately needed: videoconferencing

skills (mean = 3.33), scanner knowledge skills (mean = 3.41), ability to record and upload video presentation (mean = 3.43), web knowledge skills (mean = 3.47), educational copyright knowledge (mean = 3.30) and computer security knowledge (mean = 3.49). Also proficiency with learning management system (mean = 3.41), knowledge to use communication tools of learning management system (LMS) (mean = 3.45), knowledge of synchronous communication (mean = 3.39) and knowledge of asynchronous communication (mean = 3.22) are moderately needed technological skills for moving from on-ground to online teaching and learning of OTM courses in Polytechnics. All the 29 items have their standard deviation ranged from 0.60 to 2.65 which are below the fixed value of 1.96. This means that the responses of the respondents were not too wide spread from the mean, the responses are slightly clustered to the mean.

On the overall, the data analyzed in Table 1 reveals that technological skills listed in the table are moderately for moving from on-ground to online teaching and learning of OTM courses in Polytechnics (mean = 3.39, SD = 0.78).

Test of Hypotheses

There is no significant difference between the mean rating of students and lecturers on the technological skills needed for moving from on-ground to online teaching and learning of OTM courses in Polytechnics.

Table 2 Summary of t-test of the difference between the mean ratings of lecturers and students on the technological skills needed for moving from on-ground to online teaching and learning of OTM courses

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Lecturers	55	3.62	0.32	2.36	268	0.019	S
Students	215	3.47	0.44				

Source: Field survey, 2021

P<0.05

The data in Table 2 reveals that there are 55 and 215 lecturers and students respectively. Lecturers had higher mean ($\bar{x} = 3.62$; SD = 0.32) than students ($\bar{x} = 3.47$; SD = 0.44). The Table reveals that there was significant difference between the mean responses of lecturers and students regarding technological skills needed for moving from on-ground to online teaching and learning of OTM courses ($t_{268} = 2.36$, $P=0.019$). Therefore, the hypothesis that stated that there is no significant difference between the mean rating of students and lecturers on the technological skills needed for moving from on-ground to online teaching and learning of OTM courses was rejected. This indicated that lecturers and students differ statistically significantly in their responses regarding technological skills needed for moving from on-ground to online teaching and learning of OTM courses.

Discussion of findings

The study found that there was significant difference between the mean rating of students and lecturers on the technological skills needed for moving from on-ground to online teaching and learning of OTM courses. This could be seen from the mean performance of lecturer of 3.62 which was greater than the mean of 3.47 for students. It was revealed that lecturers possess technological skills than the students by 0.15 mean differences. This implied that lecturers and students differ statistically significantly in their responses regarding technological skills needed for moving from on-ground to online teaching and learning of OTM courses. This finding agreed with Adefisayo (2010) who reported that to facilitate better performance, the teacher should always equip himself with necessary facts, skills and must try to enrich himself with new knowledge and ideas. This is also in line with Alan (2019) who stated that technology skills are the ability to perform tasks that require the use of certain tools, whether tangible or intangible, and the technology required to master their intended uses in a variety of scenarios. Debbie (2015) opined that technology skills are fundamental; they enhance the instructor's ability to connect with students in online environment. He corroborated further that technology skills in this context usually refer to an individual that is lecturers and students who possesses the knowledge and expertise to use related devices and online platforms to perform and operate successfully in online environment. Therefore, technology skills are often required and very important to possess by lecturers and students to operate machinery, tools, software, and operate successfully in online environment. They are usually very practical and demand in-depth training. Hence, technological skills are highly needed both by the lecturers and students for moving from on-ground to online teaching and learning of OTM courses.

Conclusion

Based on the findings of this study, it was concluded that technological skills are highly needed to move from on-ground to online teaching and learning of OTM courses. This implied that possessing adequate technological skills will facilitate easy moving from on-ground to online teaching and learning of OTM courses. It will afford the lecturers and the students' ability to be able to navigate successfully in online environment. The technological skills include among others; computer/ICT skills, word processing, spreadsheet/Ms-excel skill, internet skill, power point presentation, E-mail skills, software downloading and uploading skill, Computer software installation and updating skill, smart board or black board teaching skill, Knowledge of copy, cut, move and paste files in different formats, ability to use online communication tools among others. This implied that for successful interaction between teachers and students in online environment in this 21st century, acquisition of technology skills is a must to be acquired. If these are not acquired it implies that it will not be possible to move from on-ground to online teaching and learning of OTM courses.

The possession of these technology skills will enhance effective interaction of lecturers and students in online environment. Based on this, adequate and relevant technology skills required for moving from on-ground to online teaching and learning of

OTM courses is important. This is because it will have a lot of benefits to the students, lecturers, and the institutions in general.

Recommendations

Based on the findings and conclusion of the study, the following recommendations are made;

1. There is a need for polytechnic management to organize capacity building for all polytechnics lecturers to be able to acquire adequate technological skills needed to move from on-ground to online teaching and learning of OTM courses in polytechnics.
2. OTM lecturers should see acquisition of technological skills as a must to possess especially in this era of ICT for them to be relevant at all time. Exposure to adequate and relevant technological skills will enhance their ability to perform successfully in online environment.

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ASSESSMENT OF MANAGEMENT STRATEGIES EMPLOYED IN SCHOOLS IN POST COVID-19 ERA IN KWARA CENTRAL SENATORIAL DISTRICTS

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Abstract

A difficult task was set for government and educational institutions as a result of the COVID-19 pandemic in Nigeria and world at large, this task is not limited to: reduce face-to-face exposure between educators and learners but maintain the quality and integrity of individual curriculums, and the quality of education overall, social distancing, water, sanitation and hygiene; hence schools employed some management strategies. This study was aimed at assessing the employed management strategies in school in the post COVID-19 pandemic. A descriptive survey research design was used for this study. The population of this study comprised all schools in Kwara central senatorial districts. Two local governments in Kwara central senatorial districts were selected; sixty (60) public schools and sixty (60) private schools respectively from Asa and Ilorin South Local Government area, Kwara State, which made up a total of 120 schools out of the 1101 schools in the two local government Areas. The instrument used to collect data was a researcher's designed checklist, titled "school management checklist" (SMC). The instrument had two sections; section A contains the demographic information of respondents, while section B is a 2 likert scale format (Yes and No) which contains 10 items. The instrument was validated and reliably tested at ($r=0.75$) using the Pearson product moment correlation (PPMC). Data gathered was analyzed using frequency count, mean and standard deviation for the research question and t .test was used for hypothesis. The findings revealed that schools in the Kwara Central senatorial Districts adhere to the management strategies in the post COVID-19 era. Also, there significant difference between the private and public schools in Kwara Central senatorial districts and there was no significant difference on school management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school location. The study recommended that there should be a concerted effort by the government to support public schools, as well as schools in the rural areas as regards school management during post covid-19 era.

Key words: COVID -19, Pandemic, digital learning, education



Introduction

The COVID-19 virus caused several crises which had far-reaching effects in the field of education, as schools were closed in March 2020 in Nigeria and in many countries around the world. During the course of the school lockdown, however, this changed the new curriculum content and the way it is being delivered. In the context of this new and challenging situation of digital learning caused by the COVID-19 school lockdown, information must be provided instantly to inform education policy and practice. In the context of this new and challenging situation of digital learning caused by the COVID-19 school lockdown, information is needed instantly to inform education policy and practice. The COVID-19 pandemic has brought tremendous changes in all socio-economic and political domains. The educational system worldwide stopped for a few months due to the risky environment of schools.

A difficult task was set for government and educational institutions which is to reduce face-to-face exposure between educators and learners, with the quality of the curriculums and the quality of education being maintained. Dhawan (2020) opined that there was a shift from the conventional classrooms into digital learning in order to tackle the conditions and adapt to the changing situations. Due to the emergency status of the pandemic, universities do not have a long-term fully planned strategic means for online learning, but rather its response over quality of the online platform. Therefore, existing platforms are used for online communication and teaching. These measures and reforms in the education system vary across countries (Crawford, Joseph, Kerryn, Jürgen, Bashar, Matt, Rob, Paulo, & Lam, 2020). During the peak of the COVID-19 pandemic, students and educators used various online platforms for learning. This included the Zoom app, Youtube live, Team link, Google hangout, Skype, Google classroom etc. The learners used one or more of these application for distributing, haring and acquiring learning materials (Kapasias, Nanigopal, Paul, Roy, Saha, Zaveri, Mallick, Barman, Das, & Chouhan, 2020).

The new post-COVID-19 educational system addressed the positive and negative aspects of online teaching. Strategic plans can be implemented in order to maintain and even improve the quality of education on all levels (Cahapay & Michael, 2020). This further implies that there should be a strategically developed unified plan regarding educational institutions, and that only smaller changes should be introduced by individual institutions. This requires a strategic approach with continuous monitoring and evaluation of standards of the newly implemented online education system (Dwivedi, Hughes, Coombs, Constantiou, Duan, Edwards, Gupta, Lal, Misra, Prashant, & Raman, 2020)

According to the guidelines for schools and learning facilities reopening after COVID-19 pandemic closures, set by the Federal Ministry of Education in conjunction with the federal ministry of health, Nigeria Centre for disease control (NCDC), and Nigeria education in emergencies working group (2020), the following were set to be adhered to by school managements: safe distancing, Alternative Learning Models for Safe Distancing (digital learning), Water sanitation and hygiene (WASH), Compulsory use of nose mask, Urgent Medical attention, Availability of thermometer to access pupils, teachers and visitors temperature.

Despite all the guidelines set by the Federal Ministry of Education there is still records of new cases. The new cases could be as a result of se factors such as un-adherence to the protocols and guidelines set by the federal government. Therefore, this paper was carried out to access the management strategies employed by schools in post COVID-19 era to check if the schools in Kwara Central senatorial districts adhere to the set guidelines.

Statement of the problem

Recent studies have shown that COVID-19 is transmitted through direct contact with respiratory droplets of an infected person (generated through coughing and sneezing) Individuals can also be infected from touching surfaces contaminated with the virus and touching their face (e.g., eyes, nose, mouth). While COVID-19 continues to spread it is important that communities take action to prevent further transmission, reduce the impacts of the outbreak and support control measures. This calls for monitoring, evaluation and assessment in schools and other sectors. This study therefore, assessed schools in Kwara central senatorial districts on the management strategies employed in schools in the post COVID-19 era.

Purpose of the study

The main purpose of this study is to examine the management strategies employed in school in the post COVID-19 era in Kwara central senatorial districts. Specifically, this study examined the:

- a. School management strategies employed in school in the post COVID-19 era in Kwara central senatorial districts based on school type
- b. School management strategies employed in school in the post COVID-19 era in Kwara central senatorial districts based on school location

Research Question

- a. What are the management strategies employed in school in the post COVID-19 era in Kwara central senatorial districts

Research Hypothesis

Ho1: There is no significant difference on school management strategies employed in school in the post COVID-19 era in kwara central senatorial districts based on school type

Ho2: : There is no significant difference on school management strategies employed in school in the post COVID-19 era in kwara central senatorial districts based on school location

Methodology

Descriptive survey research design was used for this study. The population of this study comprised all schools in Kwara central senatorial districts. Purposive sampling technique was used to select two local governments in Kwara central senatorial districts; Asa and Ilorin South Local Government area: Simple random sampling sixty (60) public schools and sixty (60) private school were selected respectively from the two local governments which made up a total of 120 schools, out of the 1101 schools in the two Local Government Areas. The instrument used to collect data was a researcher's designed checklist, titled "school management checklist" (SMC). The instrument had two sections; section A contains the demographic information of respondents, while section B is a 2 likert scale format (Yes and No) which contains 10 items. The instrument was validated and reliably tested at ($r=0.75$) using the Pearson Product Moment Correlation (PPMC). Data gathered was analyzed using frequency count, mean and standard deviation for the research question and t .test was used to test the formulated hypothesis.

Results

Research Question 1: What is the management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts?

Table 1: Table showing the percentage and mean distribution of management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts.

S/N	ITEM	YES	NO	MEAN	RAN K
1	Tables and chairs are evenly spaced and easily accessible by the teacher	91(75.8)	29(24.2)	1.8	1 st
2	The use of nose mask is compulsory at all times	85(70.8)	35(29.2)	1.7	2 nd
3	Availability of thermometer to measure pupils and teachers temperature	77(64.2)	43(35.8)	1.6	4 th
4	Necessary classroom materials and supplies are accessible by the pupils (sanitizers and nose mask)	56(46.7)	64(53.3)	1.5	8 th
5	Availability of interactive boards for teaching and learning process	60(50.0)	60(50.0)	1.5	8 th
6	Availability of online platforms to improve teaching and learning process	54(45.0)	66(55.0)	1.5	8 th
7	Well ventilated classrooms to allow free air flow	71(59.2)	49(40.8)	1.6	4 th
8	Availability of WASH facilities and water points in line with WASH guidelines and prescribed standard	73(60.8)	47(39.2)	1.7	2 nd
9	Availability of clinical personnel in schools	76(63.3)	44(36.7)	1.6	4 th
10	Regular trainings and seminars on Covid-19 rules and regulation are conducted.	72(60.0)	48(40.0)	1.6	4 th

Note: The figures in parentheses are in percentages

Table 1 showed the management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts. The following showed the management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts follows: Tables and chairs are evenly spaced and easily accessible by the teacher (1.8), the use of nose mask is compulsory at all times (1.7), availability of thermometer to measure pupils and teachers temperature (1.6), necessary classroom materials and supplies are accessible by the pupils (sanitizers and nose mask) (1.5), availability of interactive boards for teaching and learning process (1.5), availability of online platforms to improve teaching and learning process (1.5), well ventilated classrooms to allow free air flow (1.6), availability of WASH facilities and water points in line with WASH guidelines and prescribed standard (1.7), availability of clinical personnel in schools (1.6) and regular trainings and seminars on Covid-19 rules and regulation are conducted (1.6). This shows that all the items are the management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts such as tables and chairs are evenly spaced and easily accessible by the teacher, the use of nose mask is compulsory at all times and availability of WASH facilities and water points in line with WASH guidelines and prescribed standard to the ranking.

Ho1: There is no significant difference on school management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school type.

Table 2: Summary of t test result showing the management strategies employed in school in the post Covid 19 era in kwara central senatorial districts based on school type.

Variable	School type	N	Mean	Std. Deviation	t-cal	Df	F	Sig	Decision
Management strategies	Private	60	15.65	2.80	5.64	118	3.89	0.00	Sig
	Public	60	12.93	2.46					

Table 2 showed the summary of t-test result showing the management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school type. It was revealed that private schools had mean 15.65 and standard deviation 2.80 while public schools had mean 12.93 and standard deviation 2.46, the t-cal was 5.64, degree of freedom 118, F was 3.89 and significant level of 0.00 ($P < 0.05$). This implies that there was significant difference on school management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school type. The difference can be seen in the mean score of the schools. There the null hypothesis that states that there was no significant difference on school management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school type was rejected.

Ho2: There is no significant difference on school management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school location.

Table 3: Summary of t test result showing the management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school location.

Variable	School Location	N	Mean	Std. Deviation	t-cal	Df	F	Sig	Decision
Management strategies	Urban	60	15.40	2.78	1.98	118	0.50	0.03	Sig
	Rural	60	14.35	3.15					

Result in table 3 showed the summary of t-test result showing the management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school location. It was revealed that Urban schools had mean 15.40 and standard deviation 2.78 while Rural schools had mean 14.35 and standard deviation 3.15, the t-cal was 1.98, degree of freedom 118, F was 0.50 and significant level of 0.03 ($P > 0.05$). This implies that there was no significant difference on school management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school location. There the null hypothesis that states that there was no significant difference on school management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school location was rejected.

Discussion

The finding of the study revealed that, all the items are the management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts such as tables and chairs are evenly spaced and easily accessible by the teacher, the use of nose mask is compulsory at all times and availability of WASH facilities and water points in line with WASH guidelines and prescribed standard to the ranking. This finding is in line to the guidelines given by Nigeria centre for disease control (NCDC) and Nigeria education in emergencies working group (2020), which states that the following were set to be adhered to by school managements: safe distancing, water sanitation (WASH), compulsory use of face mask etc. Also, the finding revealed that, there was significant difference on school management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school type. This implies that there was notable differences in public and private school management strategies employed. This finding supports that of Stein-zamir (2020) which revealed that, there are significant differences based on school types school environment and management strategies employed during the post Covid-19 era. Lastly, the findings revealed that, there was no significant difference on school management strategies employed in school in the post Covid-19 era in Kwara central senatorial districts based on school location. This implies that, irrespective of rural and urban schools, there was no notable differences in the management strategies employed in these areas.

Conclusion

It could be seen that public schools in the rural areas are lagging behind in the availability and appropriate usage of COVID-19 materials for the safety of the pupils. Also, public schools should be equipped with COVID-19 materials like hand sanitizers, soap, hand gloves, thermometers, face masks, adequate water supply and so on, to ensure safety of the pupils and the staffs.

Recommendations

It was based on the conclusion that the following recommendations were given:

1. It is recommended that the school management in rural areas should be educated on the use of the materials and the dangers as well as consequences of failing to use the materials.
2. Seminars, training and meeting should be organized to enlighten the school management
3. Parents in the rural areas and public schools about COVID-19 and vaccines should be provided for the schools in the rural areas.

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VIRTUAL TEACHING AND LEARNING OF BUSINESS EDUCATION IN POST COVID-19 ERA IN NIGERIAN HIGHER INSTITUTIONS

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Abstract

The focus of this study is on virtual teaching and learning of Business Education programme in post COVID-19 pandemic in Nigerian higher institutions. It argued that conventional strategies of teaching are not adequate for teaching and learning during and after the COVID19 pandemic; due to the lockdown, social distancing and observing all protocols of the pandemic. Scholars are of the view that e-learning would be the best alternative: however, the conventional methods of teaching holds sway in the educational sector. In light of this, scholars believed that the Google Classroom framework, E-learning and Virtual Classroom which has been in vogue in many countries of the world could be the best alternative for and after the Pandemic in Nigeria tertiary institutions. The paper reviewed the benefits of Google Classroom, E-learning and Virtual Classroom. The manuscript also mentioned some challenges that can militate against the strategy in Nigeria higher institutions. It was concluded that Google Classroom, E-learning and Virtual Classroom are taking a basic step today, but after a decade, it might replace the traditional classroom teaching because it won't be like a robot teaching but would, be an innovation in the educational system of Nigeria. Therefore, the researchers recommended among others; that National Universities Commission (NUC), National Board for Technical Education (NBTE) and National Commission for Colleges of Education (NCCE) should strengthen their monitoring and evaluation team to ensure proper monitoring of the correct software and hardware are purchased and adequately installed in every higher institutions of Nigeria.

Keywords: COVID-19, Google Classroom, E- learning, Virtual Class room for teaching and learning.

Introduction

The emergence of Corona virus known as the COVID-19 Pandemic devastated all sectors of the global economy. Nigerian government has imposed strict measures to contain the spread of the COVID-19 Pandemic. Most face-to-face activities, including teaching and learning, were restricted. Nigerian universities, polytechnics and colleges of education have postponed the beginning of spring semester. Students are not allowed to return to campuses without approval. The educational system of Nigeria was halted because of social distancing and the lockdown. The conventional paradigm of teaching fails and teaching and learning suffers a severe setback all over the world including Nigeria. Teaching and learning in business education is evolving, many decades ago in Nigeria, the conventional methods of teaching holds sway in the educational sector (Aina & Langenhoven, 2015). In recent times, teaching and learning had developed into an electronic paradigm (e-learning) that pervaded the entire schools of the world. However, in Nigeria's higher education context the issue of e-learning is not common (Kyari, etal. 2018). The world is not static but dynamic and technology is changing human endeavour rapidly. Along with the changes are various challenges the human race is facing which makes our education fragile and weak such as the current problem of COVID-19 Pandemic. The pandemic has structures exposed the weakness in teaching and learning in Nigerian tertiary institutions because the typical teaching paradigm fails. Although, e-learning is not new in the Nigerian educational system, the quality and effectiveness are critical. One learning framework that enables students to connect with the teacher to learn outside the school context is e-learning, virtual classroom and Google classroom.

The E-Learning Intervention

The term E-learning is a generic (comprehensive or general) expression for all learning which is based on the use of Information and Communication Technologies (ICT) the term refer to the use of various technologies and tools to support teaching and learning in different contexts, including face-to-face settings and distance learning separately or in combination in which case e-learning is usually called blended learning (Otunuya, 2016). According to Wikipedia (2016) e-learning is the use of electronic educational technologies in teaching and learning. It makes use of modern tools and being accessible by using technological tools that are either web-based, web- distributed or web-capable such as desktop and laptop computers, interactive white boards, digital technology, electronic communication tools as email, discussion boards, chat facilities and video conferencing, virtual learning environments, learning activity management system, network digital devices and associated software and course were with learning scenarios, worksheets and interactive exercises that facilitate learning. Deducing from the above, e-learning can be said to be learning through computer internet connectivity which is gradually putting the conventional classroom instruction into oblivion. E-learning exploits interactive technologies and communication system to improve learning experience and has the potential to transform the way we teach across the board, which can raise standards and widen participation in lifelong learning. E-learning enhances theory by extending and supplementing face-to-face learning rather than replacing it. It enables learning to take

place when it is most needed (during corona virus pandemic) and is convenient. Learning can be provided with specific learning objectives, it is 'learner-centric' in that it can be customized to suit an individual's learning needs and learners can choose different learning objects within overall packages (Otunuya, 2016). E-learning is classified as computer-based and internet based, the type depends on the user mode. The computer-based involves the use of Information and Communication Technology ICT, while the internet-based is purely online. The computer-based e-learning includes the use of computer software and hardware while the internet-based comprises the use of e-mail, blog, and other references (Arkorful & Abaidoo, 2014). Upon this, the e-learning could be classified by this paper to be blended and online learning. The definition of blended learning varies according to the individual perspective (Bryan & Volchenkova, 2016).

Blended learning is an approach to education that combines online educational materials and opportunities for interaction online with traditional place-based classroom methods. It requires the physical presence of both teacher and student, with some elements of students control over time, place, path or pace. Blended learning provides individuals with the opportunity to enjoy the best of both worlds. For example, a student might attend classes in a real-world classroom setting and then supplement the lesson plan by completing online multimedia coursework. Blended learning is also referred to as "hybrid" learning, and can take on a variety forms in online education environments, which might utilize it as a primary teaching method within the curriculum which can be seen as learning is rotation; self blended, and enriched virtual (Bryan & Volchenkova, 2016). Cleveland-Innes and Wilton (2018) categorized blended learning into three, which are blended presentation and interaction, blended block, and fully online. Some tools are peculiar to e-learning for effectiveness depending on the type. The e-learning or online teaching and learning courses can be what are called "synchronous or "asynchronous". Synchronous courses are those in which teachers and students are in contact with each other at the same time in a form of immediate feedback and forth communication.

Online teaching can occur in a "chat room" as a type of software platform where all participants can see what each person contributes as the comment and questions appear onscreen, or in a combination computer/teleconferencing kind of classroom. Online refer to not only the accessibility but also its connectivity, flexibility and ability to promote varied interactions whereby the teacher can show and lecture information and students can type questions and comments that all can see or just the teacher can see, or the students can speak on the phone to comment or questions as the case may be, which required the utilization of some tools for instructions in higher education for its effectiveness. According to Pande et al., (2016), Weblog, Social bookmarking, Wiki, RSS, Podcasting, Instant messaging, Text chat, and internet forums are essential tools for any e-learning. The benefits or advantages of e-learning are enormous. Some of the advantages according to Pande et al., (2016), includes flexibility, efficiency in knowledge and qualification enhancement, motivation of students' interaction, cost-effective, and others. Despite the vital roles e-learning plays a verities over its unlock full potentials (Kyari et al., 2018).

E-learning attempts to shift the focus of the educational environment away from the physical teacher-student context while disseminating information (Franklin & Nahari,

2018). The e-learning in some parts of the globe is not a new phenomenon in promoting education; Nigeria higher institutions are using it to promote distance education and lifelong learning (Ajadi et al., 2019). Several studies had been documented on e-learning and how students received instructions from teachers and learn adequately at all times including the vacation period (Aina & Olanipekun, 2018). Different types of e-learning could be explored as practiced in most developed nations. The typical e-learning in most Nigerian higher institutions is the distance learning programme. It often describes the effort of providing access to learning for those who are geographically distant. Distance education uses emerging media and associated experiences to produce distributed learning opportunities these definitions recognize the changes that are apparent in the field and attributed them to the new technologies that are being made available. There are concerns about how distance learning programme could effectively teach online students by exploiting ICT technologies and collaboration to enhance in-depth interactive engagement of learning and teaching in the Pandemic Era. Some devices used for this distance learning programme are TV, CD-ROM, Radio, interactive video and audio discs, teleconferencing, video conferencing, power point presentation, web or internet services and so on (Kyari et al., 2018) and recently the android mobile phones (Aina & Olanipekun, 2018). E-learning is critical to higher education as it uses of information and communication technologies in various processes of education to support and enhance learning (Pand et al., 2016). Therefore, to mitigate the impact of COVID-19 on the learning of business education programme in higher education required the adoption of e-learning during the period of lockdown it becomes imperative. However, due to the rule of social distancing, any learning that requires physical contact during teaching and learning may not be effective. Given this, verity of the blended learning may not be the best for education system at this period except for the full online mode. Therefore, Basher, (2017) pointed out that, making an extensive literature search shows that the best e-learning suitable for teaching and learning at this period could be the e-learning, Google Classroom and Virtual Classroom.

Benefits of E-learning as a tool for Teaching and Learning of Business Education students

The benefits of e-learning are as follow;

Increased quality of learning with deeper critical reflection and systematic scaffolding of ideas taking place, Convenient to minimal disruption of family and work life, Increase interaction with more accessible teachers and with decrease feedback turnaround time, Elimination of space, time and geographical constraints, Increase peer interaction due to a collaborative rather than competitive learning environment (Usun, 2013).

Google Classroom

Google Classroom is a Google Apps for educational system that helps the lecturers to create and organize assignments quickly, provide feedback efficiently, and communicate with their learners easily (Shaharane et al. 2016). The application has been used as e-learning and research studies indicate the application helps students to learn more electronically and teachers spend more time with students than with papers (Rabb et al.,

2018). Google classroom is an emerging technology in education since 2014 which had impacted teaching and learning in most developed and developing nations (Henukh et al., 2020). Previous studies showed that Google classroom enhances ongoing learning on the basis that the students and the teacher can be sited in various geographical contexts (Henukh et al., 2020). Previous studies had suggested that e-learning has challenges that could make them not suitable at this period of COVID-19. The inadequacy of Nigeria's weak and underdeveloped broadband infrastructure is a significant shortcoming (Trucano, 2014). According to Mohamedbhai (2020), inequalities could be one problem of Google Classroom because of the differences existing between urban and rural students; between the rich and the poor who cannot afford the cost of internet. Ajadi et al., (2019), opined that the problem of bandwidth and diversion of intention on the net are some of the problems associated with e-learning. Earlier studies show that Google Classroom enhances learning on the basis that the students and the lecturers can use it in different geographical locations (Henukh et al., 2020). Google Classroom launched less than a decade ago and has been one of the compelling ways technology in impacting teaching and learning in the world (Azhar & Iqbal, 2018). Given the above, it is apparent that one way to mitigate the impacts of COVID-19 in Business Education courses and any field of educational system may be to adopt e-learning mode to teach education in Nigeria higher institutions. Therefore, the online e-learning, which does not depend on traditional paradigms like the Google Classroom would be the best for instructions in Business Education programme and other educational discipline. The Google classroom framework would provide the same instructions to every student irrespective of their parent's background. It will offer the students the same classroom context as against the present situation where some students attend school well equipped with learning resources while some do not. The three fundamental menus when anyone logs in to the Google classroom account are streams, class work, or student activities, and people (Henukh et al., 2020). The stream is used for creating announcements, to discuss ideas, or see the flow of assignments, materials, quizzes from the topics taught. The lecturers use class work to make test questions, pre tests, upload materials, and hold reflections (Henukh et al. 2020). The lecturers used the people menu to invite students by using the access code that is available in the people bar. Research shows that many countries are using Google Classroom in their schools because of its effectiveness. Google Classroom has lots of educational benefits that could be excellent for Business Education programme. Hussaini et al., (2020), opined that single classroom allowed lecturers to post notes, assignments, create different groups in one class, invite some lecturers or for peer lecture to the class and it is flexible and interesting to both side.

Google Classroom can be accessed anytime and anywhere, students do not need to get to a designated building called classroom before receiving lectures, parents and guardians can track the progress of their wards (Mafa, 2018). It minimizes the paperwork for the lecturers, helps classroom management and enhances the student-lecturer interaction as well as communication (Azhar & Iqbal, 2018). However, there is no perfect system without any challenges. Google Classroom has some instructional challenges (Henukh et al., 2020). Some of the challenges may not be peculiar to it only, but to all the

e-learning strategies. For instance, laboratory experiments cannot be taught with Google Classroom except to demonstrate. Therefore, the laboratory experiment for students during the COVID-19 may not be possible through the Google Classroom. The best alternative is to teach the theory aspects of Business Education courses by demonstration through the Google Classroom while the laboratory works come later in a safe environment. Nevertheless, some factors may make the adoption of Google Classroom unsuccessful for Business Education programme in Nigerian tertiary institutions.

Factors against the use of Google Classroom in Nigerian Higher Institutions

The first problem is the government insensitivity to innovation in the education sector. The Nigerian governments in all the three levels are not ready for innovation in educational system; the only type of innovation the government welcome is the one that would help the government official's award contracts to their cronies or family members (Nwaifo & Uddin, 2009). The people in government today and in the past also do not cherish any innovation that will not enhance their pecuniary desires no matter how credible and good the innovation may be. Many innovations in education have been frustrated because of the above point. This is the reason the nation changes from one system of education to another with every new government. The 6-3-3-4 system of education was not successful because of many reasons, one of these is the attitudes of the government and people (Nwaifo & Uddin, 2009). Another problem is the poor bandwidth, the inadequacy of Nigeria's fragile and underdeveloped broadband infrastructure is a drawback to e-learning (Trucano, 2014). This is a problem that could be attributed to the government and heads of tertiary institutions in Nigeria. Funds are not made available to buy good internet facilities to improve bandwidth or broadband infrastructure. Where such monies are made available the heads of institutions often misplace their priorities. There are cases where monies budgeted for e-libraries were misappropriated due to the high level of corruption in our Nigerian institutions. The worst of the entire problem is the poor quality of the academic staff in Nigeria higher institutions. It is worrisome at this information and communication technology (ICT) age that many lecturers are not computer literates. The quality of higher education depends upon the quality of the lecturers imparting the knowledge; (Nagoba & Mantri, 2015). According to Adhikary (2018), the qualities of the lecturers are does who are active users of ICT facilities and using virtual classroom for teaching and learning as is indispensable for any quality teaching process. The use of Google Classroom cannot be successful except the lecturers are ICT and virtual classroom compliance.

Virtual Classroom (Algahtani, 2011)

A virtual classroom is not so different than the traditional classroom; in a virtual class, there is a lecturer who is teaching but not in the class and in front of a camera of a computer somewhere and the students participate in his class sitting in their room in front of their computers. In the virtual classrooms there can be an interactive session like a traditional classroom, students and lecturers can interact. Virtual Classroom can be defined as "A collaborative web conferencing tool with an online white board, breakout rooms,



and screen sharing capabilities, for teachers and tutors who want to conduct highly interactive live online teaching sessions.” [<https://www.vedamo.com/virtual-classroom/> Retrieved 2020]

Advantages of Virtual Classroom

Virtual Classroom has many advantages; the following are some of the advantages [<https://www.vedamo.com/virtual-classroom/> Retrieved 2020]

Virtual classroom are more helpful for the students who cannot attend the schools or college on a regular basis, It gives an advantage for the student to attend classes from anywhere in the world, It also reduces the classroom phobia of students, Virtual classroom is the personalized learning; students can learn at their will, It gives students and lecturer a world wide exposure. Virtual classroom are effective and efficient, and it consumes less time, unlike the traditional method of teaching in schools or colleges, If having necessary equipment, it would provide a golden opportunities to the students from the remote villages and area, It gives access from anywhere in the world, any time as per the schedule of the learner or learners, It sharpens digital skills.

Disadvantages of Virtual Classroom

The following are some of the disadvantages of Virtual Classroom:

One of the main disadvantages is that it requires a computer and a steady internet connection, it is also criticized for its technology and undemocratized nature, Virtual classroom requires students of Business Education with technological literacy, Perception of the people is that, it is made for only urban students and unavailability of regular network.

Concept of Business Education

Business Education programmes it remains relevant in providing the needs of individual and that of the society; it must embrace current trends in the academic and economic demands of the society. Nedum-Ogbede, (2016) defined Business Education as component of vocational education programme that prepare an individual for career in business and also to be an intelligent consumer of goods and services. Business Education is rooted in Vocational Education with specific mandate of providing skills, attitude and knowledge needed for employment or running a business. According to Nedum-Ogbede, (2016). Business Education is the acquisition of knowledge, skills and attitude that are required for successful promoting and administering business enterprises. The need for Business Education as a form of education is crucial especially in this era of globalization, information and communication technology (ICT) and Covid 19 Pandemic in which work processes and institutions are getting increasingly flexible, multi-tasking and performance base. The emergence of Business Education in the global scene is necessitated by the need to provide the society with a form of education that promotes lifelong learning, innovation, need of the community, employability and self reliance, new technologies in business education are designed to help the students acquire the basic skills that will make them employable and relevant in the ever changing business environment which prepares

students for variety of careers in high-tech business offices (Nedum-Ogbede, 2016) For tertiary institutions in Nigeria, that offered Business Education programmed to deliver on their mandates, the quality of the training given to individuals passing through a course or the other should be such that can give adequate skills and information needed in the real world sense. If Business Education should serve this purpose of providing the needs of the learners and the society, there should be a continuous improvement in the implementation of the new technologies by the Nigeria institutions offering Business Education courses in order to ensure that the quality of education provided is in line with societal demands.

Teaching and Learning of Business Education courses after the COVID 19 Pandemic

Corona virus outbreak has significantly accelerated development of online education in Nigerian higher education. Internet, Virtual Classroom, Google Classroom, e- Learning, big data, Artificial Intelligence, 5G, and cloud-based platforms and so on, among other technologies, have been put into service of business education and other fields of education. However, a more flexible way of teaching and learning does not end up with infrastructures.

Rather, infrastructures are only the first step towards a new paradigm of teaching and learning in post-pandemic time. This paradigm could represent a shift from traditional, teacher-cantered, and lecture based activities towards more student-cantered activities including group activities, discussions, hands-on learning activities, and limited use of traditional lectures. This requires conceptual and philosophical rethinking of the nature of teaching and learning, roles, and connections among teachers, learners, and teaching materials, in post digital learning communities (Jandrić et al. 2018). Full Long-term integration of online teaching and learning into tertiary institutions curricula implies further attention to quality education system. The researchers' observed that higher institutions of Nigeria should focused to the following activities:

1. There is the need to continue the development of open educational platforms which allow access to the high quality of learning resources. Post digital in Business Education Programme and other fields of study.
2. There is the need to conduct quantitative and qualitative research and evaluate current models of online teaching and learning, with a particular focus to their long-term sustainability.
3. There is the need to develop teaching and non- teaching staff capacity for online teaching, and professional staff capacity for supporting lecturers and online systems.
4. There is the need to encourage cooperation between universities, polytechnics, and colleges of education, international organizations, private sectors, civil society, and other stakeholders, to promote high-quality online learning throughout the society.

Lecturers are crucial for inclusive and equitable provision of high-quality distance education. They are expected to have knowledge, skills, and ethics to conduct online teaching, and that calls for more flexible and dynamic post-pandemic teacher education. Post-pandemic national teacher education could be composed of face-to-face teacher education, blended teacher education, virtual classroom, Google Classroom, e- learning

and online teacher education (Zhu, 2020). National online teacher education could be categorized into sections which provide learning opportunities to future teachers at all levels, Early Childhood Education, Primary Education, Secondary Education, Vocational Education Sectors and Business Education Programme and so on. Online teacher education platforms could function as a traditional teacher education institute which provides pre-service and in-service programmes. This could be supported by online platforms with rich digital materials and resources. Curriculum and pedagogy need to be updated, and should become models of successful online pedagogies that could be taken into future teachers' practices. Last but not the least, it is critical to build up an enabling institutional environment for sustainable national online teacher education. There is the need to develop evidence-based policies supported by guidelines for their implementation. To provide professional reference base for online teacher education, a framework of competencies for conducting online teaching, and other standards should be developed. In our post digital context, online and offline (teacher) education cannot be thought without each other (Jandrić et al., 2018). The researchers advocate development of a holistic teacher education system, regardless of used mode of delivery, which could support present and future teachers in becoming more resilient to crisis similar to the COVID-19 pandemic. COVID-19 pandemic has brought about a huge disruption to all spheres of human life.

Nigerian higher education, have responded to the crisis with reasonable success. However, the researchers strongly believe that the impact of Covid-19 pandemic on Nigerian educational system should extend well beyond tackling the current crisis—it should also bring out potential development opportunities for the future (Jandrić, 2020). The current situation requires innovation and renewed attention to more research, study, and reflection, about each sector of education in Nigeria and globally. The present researches during the Pandemic era will significantly help in developing a more sustainable, inclusive, and equitable education after the pandemic era.

Conclusion

COVID-19 has changed world, and people are scared of coming out of their homes for whatever reasons. E- Learning, Google Classroom and Virtual Classrooms, could be the future schools and colleges of our world. From the history of the technology, it is obvious that it takes decades for a technology to be everyday thing ergo. Google Classroom, E-learning and Virtual Classroom are taking basic step today, but after a decade, it might replace the traditional classroom teaching because it will not be like a robot teaching. The Google Classroom, Virtual Classroom and e-Learning would, be an innovation in the educational system of Nigeria and the Nation in general.

Recommendations

Based on the conclusion made, the following suggestions were made:

1. National Universities Commission (NUC), National Board for Technical Education (NBTE) and National Commission for Colleges of Education (NCCE) should strengthen their monitoring and evaluation team to ensure proper monitoring of the correct software and hardware are purchased and adequately installed in every higher institutions of Nigeria.

2. Academic personnel of every institution in Nigeria must be adequately trained and re-trained through seminars, workshops, conferences and other means of information dissemination. Those who are not computer literate must make use of staff development to update their computer's knowledge through the management of higher institutions.
3. Government should be prepared fully to adopt the paradigm without any political bias, and government should make adequate money available to strengthen and develop the Nigerian broadband infrastructure.

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EFFECT OF DIFFERENTIATED INSTRUCTION ON THE ACADEMIC ACHIEVEMENT OF PUPILS IN MATHEMATICS IN ILORIN WEST LOCAL GOVERNMENT AREA, KWARA STATE

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Abstract

Mathematics as a school subject serves as a foundation for technical education which is the bedrock of technological advancement of any nation. Research efforts to improve pupils' performance in the subject are very rare. Therefore, this study examined the effect of differentiated Instruction on pupils' academic achievement in mathematics in Ilorin West Local Government Area of Kwara State. The study adopted a pretest posttest control group quasi-experimental research design. One validated and reliably tested research instrument titled Mathematics Achievement Test (BSTAT) was used. The reliability index of SSAT ($r = 0.79$) was determined using Pearson Product Moment Correlation (PPMC). Seven research hypotheses were formulated and tested at 0.05 level of significance. The hypotheses were tested with inferential statistics of Analysis of Covariance (ANCOVA). The findings of the study revealed that treatment had significant effect on pupils'

academic achievement ($F_{(1; 78)} = 64.888, P < 0.05$) in mathematics. However, gender ($F_{(1; 78)} = .437; P > 0.05$) and school type ($F_{(1; 78)} = .192; P > 0.05$) did not have significant effect on pupils' academic achievement in mathematics. Based on the findings, it was concluded that differentiated instruction can improve academic achievement of pupils in Mathematics. Based on the conclusion, it is recommended that differentiated instruction should be used in teaching mathematics in primary school. Also, government and private school owners should organize or sponsor teachers to attend workshop or conference on the use of differentiated instruction as a teaching strategy.

Keywords: Differentiated instruction, pupils' academic achievement, Basic Science and Technology

Word Count: 242

Introduction

Mathematics is the base for all technologies in the world. In Nigeria, mathematics is compulsory at primary and secondary school levels. As a matter of fact, a credit pass in mathematics is required to get admission into any prestigious university in Nigeria. Mathematics plays a significant practical role in the lives of individuals and the world of

society as a whole. It enhances problem solving and analysis skills in that it enhances students' logical, functional and aesthetic skills. Mathematics is applied in daily life in that it compels the human brain to formulate problems, theories and their solutions. Mathematics also prepares children to face a variety of simple to multifaceted challenges every human being encounters on daily basis. There is a general agreement in any society that every child should study mathematics at school to acquire skills for adult life (Njagi, 2015).

It is not surprising that mathematics teaching is more at the forefront compared to other problems in the education system. It is because mathematics, which transforms the human mind into an unlimited tool of calculation, has always kept its importance and priority due to their contribution to scientific developments as well as facilitating people's daily life. However, new job and career opportunities depend on the information and communication technologies that require mathematical skills (Karali & Aydemir, 2018). Therefore, mathematics is the key to problem solving and to bringing a way of thinking that deals with knowledge and skills required by daily life (Altun, 2013).

Today, mathematical methods are applied in most areas of human endeavour and as such mathematics learning plays a fundamental role in economic development of a country. In her march towards scientific and technological advancement, Nigeria needs good performance in mathematics for students at all levels of schooling. Therefore, all hands must be on deck to ensure improvement in the academic achievement of pupils in mathematics at primary school level where solid foundation for further studies could be laid. This is why a study of this nature is pretty important and necessary.

Technology is the mainstay of any societal development and mathematics has been recognized as the bedrock of technology and sciences (Rasheed, 2008). In fact, the world is at an age where no human endeavour could survive or develop without the application of mathematics and/or technology since almost all kinds of job have been computerized. Apart from this, the subject develops the computational skills of the pupils to solving the day-to-day problems that require mathematical knowledge. It forms the basis for further education in almost all fields of study in all higher institutions (Tella, 2009).

Despite the importance of Mathematics, it has been noted with displeasure that students' academic achievement in Mathematics has not been encouraging. The academic achievements of learners in external examination of West African Examinations Council (WAEC) in the years 2017 and 2018 were not heartening because students who had credit pass in Mathematics were not up to 50% of the learners who sat for the examination in Kwara state (National Bureau of Statistics, 2019). The percentage of learners who had pass marked in mathematics in 2017 and 2018 were 49% and 46% respectively. Considering the status and the importance of mathematics in various spheres of our national life, this poor learning situation should not be allowed to continue. This raises a serious concern since if the trend is unchecked it will undermine national development.

Isa, Mammam, Badar and Bala (2020) opined that improvement in the academic achievement of pupils is dependent on method of teaching. That is why the poor academic achievement of pupils in mathematics has been partly attributed to lecture method often used by some teachers. Hence, Olawole (2019) recommended the use of differentiated

instruction as a method of teaching to bring about improvement in the academic achievement of pupils.

According to Tomlinson (2003), differentiated instruction is modified instruction that helps students with diverse academic needs and learning styles master the same challenging academic content. While it is accepted that the common basis for all student is a need for acceptance, nurturing and respect, attending to differences, assist each student in experiencing a degree of triumph by encouraging them to be all that they can be as individuals. The use of the one-size-fits-all curriculum no longer meets the needs of the majority of learners (McBride, 2004). In addition, addressing students' differences and interests appears to enhance their motivation to learn while encouraging them to be committed and stay positive (Tomlinson, 2004).

A number of studies (Njagi, 2015; Ferrier, 2007; Karadag & Yasar, 2010; Osuafor & Okigbo, 2013) have been carried out on the effectiveness of differentiated instruction on the academic achievement of students in different school subjects other than Mathematics. Aside that studies on differentiated instruction at the primary level of education, to the best knowledge of the researcher, has not been carried out in Ilorin West Local Government Area of Kwara State where this study was carried out and this the research gap the study intend to fill.

Another variable of interest is gender. Many researchers (Pirmohamed, Debowska & Boduszek, 2017; Lori, Michelle, Glenda & Brian, 2019; Nnamani & Oyibe, 2016) have investigated the effect of gender on the academic achievement of students in different subject areas but the findings of these various studies were conflicting. Hence, this necessitated the need to include the variable in this study. Similarly, school type is another variable for consideration in this study. Public secondary schools are neither controlled by individuals, private interest groups, or agencies but by the government. On the other hand, however, Private schools can be referred to the type of educational organizations that are controlled by individuals, interest groups or non- governmental organizations (Babatunde, 2019). A number of researches (Azigwe, Adda, Awuni & Kanyomse, 2016; Munanu, 2016) have been carried out on the effect of school type on the academic achievement of learners in schools but the findings from these studies have suffered inconsistency and contradiction. Hence, that justified the need to include school as a moderator variable in this study.

Statement of the Problem

The low performance of pupils in mathematics particularly in the recent years has not been encouraging. This poor performance of pupils has been partly attributed to the pedagogical methods adopted by teachers. Claims have been made that the lecture method often used by some teachers seems to be partly responsible for the poor performance of pupils. Hence, scholars suggested method of teaching that meet the need of each learner. And one of the methods which consider the interest of each pupil in the classroom is differentiated instructional method of teaching. Studies on differentiated instruction have been conducted but deserved research attention has not been given to the investigation of the effect of differentiated instruction on the academic achievement of pupils in

mathematics particularly in at the primary school level. Also, this kind of study has not been conducted in the Ilorin West Local Area of Kwara State.

Research Hypotheses

Ho1: There is no significant main effect of differentiated instruction on the academic achievement of pupils' in Mathematics.

Ho2: There is no significant main effect of gender on the academic achievement of pupils in Mathematics.

Ho3: There is no significant interaction effect of treatment and gender on the academic achievement of pupils in Mathematics.

Methodology

The study adopted a pretest posttest control group quasi-experimental research design with a factorial design of 2X2. The target population was all primary four (4) pupils in Ilorin West Local Government Area of Kwara State. Simple random sampling technique was used to select two public primary schools. The first school was experimental group while the second school was the control group. Only primary four pupils in each of the selected schools were involved in the study. The research instrument used in the study was researcher-designed achievement test titled 'Mathematics Achievement Test (MAT). The question items of MAT were drawn from the Mathematics scheme of work for primary four, and it consisted of multiple choice questions. Before its adoption for administration, a draft copy of MAT was given to lecturers in the Department of Early Childhood and Primary Education, Kwara State University as well as two mathematics teachers who validated the instrument. To establish the reliability of the MAT, test retest method was used with an interval of two weeks. Afterwards, Pearson Product Moment Correlation (PPMC) was used to determine the reliability coefficient and the coefficient was established at 0.76. The data collected was analyzed using inferential statistics of Analysis of Covariance (ANCOVA). The hypotheses were tested at 0.05 level of significance.

Results

Research Hypothesis One: There is no significant main effect of treatment on the academic achievement of pupils in Mathematics

Table 1: Summary of Analysis of Covariance (ANCOVA) showing the main effect of treatment in pupils' academic achievement in Mathematics

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3192.169 ^a	4	798.042	19.340	.000
Intercept	1626.375	1	1626.375	39.415	.000
Pretest	33.797	1	33.797	.819	.368
Treatment	2677.495	1	2677.495	64.888	.000
Gender	18.039	1	18.039	.437	.510
Treatment * Gender	7.918	1	7.918	.192	.663
Error	3218.529	78	41.263		
Total	66648.000	83			
Corrected Total	6410.699	82			

Table 1 shows the effect of treatment on pupils' academic achievement in Mathematics in Kwara state. There was significant main effect of treatment on pupils' academic achievement in Mathematics in Kwara state ($F_{(1; 78)} = 64.888$, $P < 0.05$). The hypothesis was therefore rejected in the light of the result since the significant value (.000) is less than 0.05. This implies that treatment had significant effect on pupils' academic achievement in Mathematics in Ilorin West Local Government Area of Kwara state.

Table 2: Summary of Bonferroni's Poc Hoc Pairwise Comparison of the scores within the two groups

Treatment	Mean Difference	Experimental	Control Group
Differentiated Instruction	34.54	*	
Conventional Method	22.28		*

Table 2 revealed that the significant main effect exposed by table 1 is as a result the significant difference between differentiated instruction and conventional method. This implies that those exposed to differentiated instruction (Mean = 34.54) performed significantly better than those exposed to conventional method (Mean = 22.28).

Research Hypothesis Two: There is no significant effect of gender on pupils' academic performance in Mathematics in Kwara State

Table 2 also revealed the effect of gender on pupils' academic achievement in Mathematics in Kwara State. There was no significant effect of gender on pupils'

academic achievement in Mathematics in Kwara State ($F_{(1; 78)} = .437$; $P > 0.05$). The hypothesis was therefore not rejected in the light of the result since the significant value (.510) is greater than 0.05. This implies that gender had no significant effect on pupils' academic achievement in Mathematics in Kwara State.

Research Hypothesis Three: There is no significant interaction effect of treatment and gender on pupils' academic achievement in Mathematics in Kwara State

Table 1 also revealed the interaction effect of treatment and gender on pupils' academic achievement in Mathematics in Kwara State. There was no significant interaction effect of treatment and gender on pupils' academic achievement in Mathematics in Kwara State ($F_{(1; 78)} = .192$; $P > 0.05$). The hypothesis was therefore not rejected in the light of the result since the significant value (.663) is greater than 0.05. This implies that interaction of treatment and gender had no significant effect on pupils' academic achievement in Mathematics in Kwara State.

Discussion of Findings

The findings of the study revealed that there was significant main effect of differentiated instruction on pupils' academic achievement in Mathematics. This implies that pupils taught Mathematics using differentiated instructions performed significantly better than their counterparts taught with conventional method. This finding is in tandem with the earlier study by Bailey and Williams-Black (2008). This finding further gave support to the study by McAdmin (2001) who reported significant improvement in the test scores of low-scoring pupils in the Rockwood School District (Missouri), following the use of differentiated instruction.

Another finding of the study revealed that gender had no significant effect on the academic achievement of pupils in Mathematics in Ilorin West Local Government Area of Kwara State. This finding corroborated the finding of Tijani (2017) who discovered that there was no significant main effect of gender on the academic achievement of pupils in Mathematics in Moro Local Government Area of Kwara State. Similarly, the finding supported the finding of Rafiu (2018) which revealed that gender had no significant effect on the academic achievement of pupils in mathematics in Ilorin West Local Government Area of Kwara State.

The findings of the study further revealed that there was no significant main effect of school type on the academic achievement of pupils in Mathematics in Ilorin West Local Government Area of Kwara State. This finding supported the finding of Yusuf (2019) who reported that school type had no significant main effect on the academic achievement of pupils. Similarly, Tijani (2017) discovered that the type of school attended by pupils did not affect their academic achievement in mathematics.

Conclusion

Based on the findings of the study, it can be concluded that differentiated instruction has effect on the academic achievement of pupils in Mathematics regardless of gender and the type of school.

Recommendations

Based on the above conclusion, the following recommendations were made:

- Teachers should adopt the use of differentiated instruction in their classroom.
- Seminars, workshops and conferences should be organized for teachers on how to use Differentiated Instruction.
- Differentiated instruction should be incorporated in teacher training programme.
- Differentiated instruction should be included in the curriculum of Mathematics.

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INFLUENCE OF VIRTUAL LEARNING ON HUMAN KINETICS EDUCATION STUDENTS' ACADEMIC ACHIEVEMENT IN POST COVID-19 ERA IN KWARA STATE UNIVERSITY, MALETE

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Abstract

The study employs the descriptive survey research design. The researchers examined the influence of virtual learning on Human Kinetics Education Students' Academic Achievement in Post Covid-19 Era in Kwara State University, Malete. Populations for the study are 105 which comprised the whole human kinetics students of 2020/2021 academic session. Research questionnaire designed in a modified four points liker's rating scale was used to collect data from the respondents. This was validated by two experts in the department of Human Kinetics and Health Education Department, Kwara State University and then tested for reliability, Pearson Product Moment Correlation Coefficient (PPMC) was used for the significant relationship the reliability coefficient is 0.83. Inferential statistic of T-test was used to test the null hypotheses formulated at 0.05 level of significance. The findings revealed that there exists significant difference between male and female respondents on the influence of virtual learning on KWASU Human Kinetics Students' Academic Achievement. It also revealed that there exists significant difference between male and female respondent on the influence of physical learning of KWASU Human Kinetics Students' Academic Achievement. Among the recommendations made, are: Male and female students should undergo a counseling session so as to diagnose their level of challenges encountered either on virtual learning or physical learning.

Introduction

The current context under the threat of the pandemic as a result of COVID-19 is causing a series of transformations different spheres of social, political, labour, and economic level. Governments have launched emergency policy initiatives based on the suspension of classes and the closure of educational centers to continue teaching activities from homes telematically through the use of information and communication technologies to be able to stop the number of infections (Zhang; Wang; Yang & Wang, 2020).

Online education has traditionally been viewed as an alternative pathway, one that is particularly well suited to Human Kinetics learners seeking higher education opportunities. However, the emergence of the COVID-19 pandemic has required educators and students across all levels of education to adapt quickly to virtual courses. The term ‘emergency remote teaching’ was coined in the early stages of the pandemic to describe the temporary nature of this transition (Hodges, Moore, Locke, Trust & Bond, 2020).

Virtual classroom has been described by Turoff (2007) as a web-based environment that allows an individual to participate in live training events without traveling to any other place. You can sit in the comfort of your environment and listen to lectures. You can participate in the laboratory exercises, ask questions and effectively interact with the teacher as if the action is taking place in a conventional classroom but it is done with the convenience of technological gadgets as desktop that have internet and phone connection. The internet on the other hand provides such advantages and new ways of communicating, interacting and assessing information for both teachers and students.

The modern system of using internet in teaching and learning is receiving great attention all over the world. The use is phasing out the traditional method of teaching which is limited to chalk and talk system of teaching and learning (Olibie, Ezoem & Ekene, 2014). The students are like the raw materials in education production while the teachers are the producing machines. The teachers would send out the materials to the students to learn for character transformation with the necessary instructions to be applied in the process.

In closed areas, especially if the number of students is high, it is obligatory for students to use masks while performing physical activities. This leads to different disease risks (heart attack, inability to breathe due to evaporation in the mask). If it is necessary to use masks in the class, it is important to carry out the lesson with light exercises and to ensure that students rest intermittently. If excessive facial sweating occurs, the masks should be changed. In this context, there will be no need to use masks in schools, especially in outdoor exercises, and the risk of contamination will be reduced. Open spaces are better than confined spaces and are the safest option (Wang, Tang, & Wei, 2020). However, if physical activity is done indoors, the space should be constantly ventilated. Ventilation systems should be used in sports halls, and their maintenance should be done regularly; air conditioning and ventilators should not be used in the halls. To avoid this aforementioned problems and stressed that can arises during face to face interaction that is the reason why the researcher suggest the use of virtual learning as against teaching in the classroom and the following are the merits accruable from the virtual classroom:

- It provides the learners the flexibility of getting the learning experiences at the same time, same place and at same rate of assimilation.
- Virtual classroom can help in good class organization. The operational documents, assignments, class notes and other related information in the internet can be readily categorized for easy accessibility for the teachers and students. The information posted on the internet could be easily revised and updated for more effective teaching and learning.

- Virtual classroom provides the learners with the opportunity of gaining learning experiences 24 hours of every 7 days of the week without tampering with the learners' leisure time.
- The system has the capability of employing the services of most experienced personnel in different areas of need including human kinetics which is not possible in traditional classroom setting.
- Another educational value is the intellectual and social partnership created by the technology of virtual classroom. Students in their use of technological equipments cultivate the habit of leadership role in relation to other students (Husu, 2020). The implication is that the technology used increases group cohesion and mutual support more especially in remote classrooms. Besides, the virtual classroom enables the Human Kinetics students to develop a range of communicative skills that enable them perform creditably in class.
- Cost effectiveness is a great advantage. Virtual classroom saves money, time and transport for students. The students who are motivated could work on their own at their home environment without wasting time and money to travel to school.
- The teacher equally enjoys the teaching because everything is digital and these works in general are sent through e-mail typed. The teacher can easily re-use his materials and can easily get materials elsewhere.
- The system can prove quite advantageous to the students in various ways with regard to its on-line features. It will help in admission, information about the courses and academic activities, assignments and projects, tests and evaluation, grading and results, as well as practical knowledge.

Despite the merits of virtual classrooms as listed above, there are some demerits associated with it. They include the following:

- Flexibility of the system: The flexibility of the system to the learners as they go about their studies with ease and convenience, comforts and adjustment of the space and timings to suit them could be abused. When they are young in age and immature to handle responsibilities to build up their career, they play away their time and fall short of expectation in the long run. Poor quality of organization and the poor quality of study materials with low quality of teaching staff make virtual classroom unacceptable in quality educational pursuit. The staff inefficiency and low productivity will adversely affect the students enrolled in the system which will affect the overall assessment of the virtual classroom.
- Training problem of personnels: In a virtual classroom, professional training is very essential. University professions who are not trained in computer and internet functions should not operate effectively. Consequently, the professors should undergo training because the more conversant they are with the online services, the more efficient the teaching strategy and curriculum would be.

- The virtual classroom is not providing real classroom experiment such as teacher student face-to-face interactions. The warmth of teacher-student relationship is absent in virtual classroom.
- Students at times generate problems for themselves by enrolling on online classes without an e-mail address or account with an internet service. This means that they cannot assess information for virtual classroom consumption. Consequently, they cannot achieve their objectives of effective learning.
- Effective participation in virtual classroom requires 'robust hardware and a broad band internet connection'. Some classrooms or computer labs may not have computers that meet the minimum or recommended specification for optimal use of virtual world (Stacy & Liz, 2008).
- Standard for accessibility is limited. Virtual words do not operate with screen readers which makes the virtually impaired not to benefit from virtual worlds.

Virtual classroom is based on Information and Communication Technology. Tertiary institution should integrate virtual learning effectively into their systems because the world is becoming more technologically inclined. That was why Oye, Lahad, Madar and Rahim (2012) called the new technological trend an e-driven world. This e-driven world has brought unimaginable changes in all aspects of life. Consequently, students should be well equipped through virtual learning to provide them with the necessary experiences for personal growth and development.

In their contribution, Olibie, Ezoem and Ekene (2014) described virtual learning as an enabling process, which depends on learners' awareness. For virtual learning to be achieved, there must be awareness to knowledge and understanding of the meaning, structure and the components of any new technology. When this is done, it will provide the base for effective learning among the students in the universities. In addition, Virtual Learning Environment (VLEs) are defined as computer-based environments that are relatively open systems, allowing interactions and encounters with other participants and providing access to a wide range of resources (Pelet and Lacarte, 2012).

Virtual Learning Programme in the Post COVID-19 Era

Online programs prepared by physical education teachers should reflect a value-oriented approach that includes behaviors such as socialization, interaction/communication, teaming, problem solving and cooperation. Also, not all students in a class are at the same level of ability. Teachers should develop online programs that will enable students to develop their basic skills at their own level. In addition, they can prepare a health and wellness-based model that incorporates World Health Organization (WHO) guidelines.

Virtual learning is a system of delivering learning materials to students via the web or recorded audio and video lectures (Tulbure, 2012). This system includes assessment, students direct participation, student tracking, collaboration and communication tools. Virtual learning environment allows participants to learn or acquire knowledge in a collaborative, co-operative learning activities and interactions. Virtual learning

environment includes a course syllabus, pre-requisites registration, skilful mentor or instructor, and distant learning applications (Fu, 2013). This normally includes materials such as copies of lectures in the form of text, audio/video presentations and the supporting visual presentations (Gurol, Kayisli, Basal, 2010).

Literature found that recently, virtual learning models, teacher-educators, and researchers are using in their classroom (Jena, 2015). Hayes, Allinson, Hudson, and Keasey, (2003), found that online learning improve the achievement of the students and it effects directly the perception. However, (Rahmani, 2012) argued that online co-operative learning is a constructive controversy, it trusts with more effectiveness then constructive controversy for student achievement. Faceto-face and on-line learning has significant effect on student's achievement (Jena, 2015b). Similarly, Johannesen, 2013). found that online collaborative learning activities help to solve problem and develop solving skills. In fact, achievement and emotion affect students' decision for online learning (Koc, 2005) and participation, interaction and academic achievement are highly related with virtual or online learning environment (Dascalu, & Trăuşan-Matu, 2015).

Human kinetics is a discipline that deals with theory and practical, the theoretical aspect are done in the class why the practical one are done perhaps on the field, in the court and etc, but because of this issue of corona pandemic both the theoretical and practical classes could not take place simply because of social distancing, the use of face mask and all protocol of covid-19 must be followed hence this was so difficult for students, then the virtual learning was introduced and the theoretical program as well as practical program were organized online, of course students will be able to look at it and demonstrate what they ask them to do.

Student's achievement has to do with the performance of students after students have been exposed to this virtual learning. Students' achievement is the measurement of the amount of academic content a student learns in a given time frame. Each instruction level has specific standards or goals that educator must teach to their students. Achievement is usually assessed through frequent progress and comprehension checks and examinations; however, there is no consensus on how it is best evaluated or which elements of it are most important.

The COVID-19 pandemic has been witnessing a growing number of online learners with heterogeneous demographic backgrounds in terms of gender a. Several studies have investigated the effect of learners' demographic backgrounds on online learning outcomes (Gašević et al., 2016). Numerous studies have explored the impact of gender (Diep et al., 2016) on online learning outcomes. Educational levels could greatly predict online learning outcomes (Huang & Fang, 2013), while the effect of gender on online learning outcomes is controversial.

Females could achieve higher learning outcomes than males because they were more persistent and committed than males (Richardson & Woodley, 2003). Females had stronger self-regulation than males, which also led to their significantly more positive online learning outcomes than males (Alghamdi et al., 2020). However, no significant gender differences were revealed in leaning outcomes because males were more stable in attitudes, while females performed well in engagement (Nistor, 2013).

This paper explores the influence of Virtual learning on KWASU Human Kinetics Education students' academic achievement in Post Covid-19 Era, the adverse influence it has on their learning, the level of students' preparedness to be part of the online learning and to ascertain areas of improvement as perceived by the students. The problem of this study pose as a question is: How would the virtual learning be structured so as to have great impacts on students' academic performance generally and improvement done in some areas for better students' participation in an online learning? Providing answers to this question is the thrust of this paper.

Research Hypotheses

- Ho1. There is no significant difference between male and female respondent on the influence of vital learning on KWASU human kinetics students academic achievement based on gender
- Ho2. There is no significant difference between male and female respondent on the influence of physical learning on KWASU human kinetics students academic achievement based on gender

Methodology

The research design adopted in this study was a descriptive survey design. This design became necessary because it is used to find out the influence of virtual learning on student academic achievement. The target population for the study is KWASU human kinetics students of 2020/2021 academic session, totaling 105. No sample is selected as the researchers made use of all the 105 students as respondents for the study. The researcher developed a structured questionnaire tagged Virtual learning influence on KWASU Human kinetics Education Students' academic Achievement (VLKHKESAA) to elicit pertinent information from the respondents and the instruments were validated by the two experts in the Department of Human Kinetics and Health Education. Reliability of the instrument was carried out using students from the Department of Early Childhood Education and it yielded a reliability coefficient of 0.83. A section in the questionnaire requested demographic information of the participants. Two research hypotheses were generated for the study and the hypotheses were tested using two sample T-test to determine the influence of gender between the independent and dependent variables in hypothesis one and to bring out the influence in both virtual and normal classroom. All hypotheses were tested at 0.05 level of significant.

Result and Discussion

Table 1: Distribution of Respondents based on Gender

Gender	Frequency	Percentage
Male	60	57.1
Female	45	42.9
Total	105	100.0

Table1 showed the distribution of the respondents based on gender. Sixty (60) of the respondents representing 57.1% were male while 45 of the respondents representing 42.9% were female. From analysis above, it is evident that the male respondents were found to be more in number than female respondents.

Research Hypothesis one: There is no significant different between male and female respondent on the influence of virtual learning on KWASU Human Kinetics Students' Academic Achievement

Table 2: summary of t-test analysis showing the difference between male and female respondent on the influence of vital learning on KWASU Human Kinetics Students' Academic Achievement

Gender	N	Mean	Std. Deviation	T	df	Sig	Remark
Male	60	13.05	3.265	1.439	103	.022	Significant
Female	45	12.20	3.590				

Table 2 shows the different between male and female respondent on the influence of virtual learning on KWASU human kinetics students' academic achievement ($t = 1.439$, $df = 103$, $p < 0.05$). The hypothesis is therefore rejected in the light of the result since the significant level is less than 0.05. This implies that there is significant different between male and female respondent on the influence of vital learning on KWASU human kinetics students' academic achievement

Research Hypothesis Two: There is no significant different between male and female respondent on the influence of physical learning on KWASU Human Kinetics Students' Academic Achievement

Table 3: summary of t-test analysis showing the difference between male and female respondent on the influence of physical learning on KWASU Human Kinetics Students' Academic Achievement

Gender	N	Mean	Std. Deviation	T	df	Sig	Remark
Male	60	13.27	3.404	1.540	103	.031	Significant
Female	45	12.31	2.762				

Table 3 shows the different between male and female respondent on the influence of physical learning on KWASU Human Kinetics Students' Academic Achievement. There is no significant different between male and female respondent on the influence of physical learning on KWASU human kinetics students' academic achievement ($t = 1.540$, $df = 103$, $p < 0.05$). The hypothesis is therefore rejected in the light of the result since the significant level is less than 0.05. This implies that there is significant different between male and female respondent on the influence of physical learning on KWASU Human Kinetics Students' Academic Achievement.

The results of hypothesis one (H_{01}) shows a significant different between male and female respondent on the influence of virtual learning on KWASU Human Kinetics Students' Academic Achievement and this corroborate the submission of Richardson and Woodley, (2003) who affirmed that females could achieve higher learning outcomes than males because they were more persistent and committed than males. Females had stronger self-regulation than males, which also led to their significantly more positive online learning outcomes than males (Alghamdi et al., 2020). However, no significant gender differences were revealed in leaning outcomes because males were more stable in attitudes, while females performed well in engagement (Nistor, 2013). In fact, achievement and emotion affect students' decision for online learning (Koc, 2005)

The results of hypothesis two (H_{02}) shows a significant different between male and female respondents on the influence of physical learning on KWASU human kinetics students' academic achievement, this study is in line with Means et al. (2013), who says disadvantages of online learning exist in learner engagement, academic success, and time-consumption, despite that numerous studies have reported the effectiveness of online learning compared with traditional learning. A large number of teachers still resisted the

use of an online pedagogical approach and believed that online learning could decrease the engagement of students, thus leading to less favorable academic success than traditional face-to-face instruction (Lederman, 2018). Trough the physical learning, excellent teachers could attract students and hold their interest more than through the online approach (Garson, 2008).

Conclusion

It was concluded that there was a significant different between male and female respondents on the influence of virtual learning on KWASU human kinetics students' academic achievement, it was also concluded that there was a significant difference between male and female respondent on the influence of physical learning on KWASU human kinetics students' academic achievement. The following recommendations were suggested based on the findings of study. Both intrinsic and extrinsic motivation must be put in place so as to allow learners to learn more. Male and female should undergo a counseling session so as to diagnose them on the challenges encountered either on virtual learning or physical learning. University management should employ more personnel that are computer oriented.

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COLLABORATION TEACHING TECHNIQUE FOR BUSINESS EDUCATION IN POST COVID – 19 ERA: BENEFITS AND CHALLENGES

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Abstract

The study is an opinion paper that examined collaborative teaching technique as it affects instruction delivery in business education programme at the college level. It focused majorly on the benefits accrued to and likely challenges that may confront and affect collaborative teaching method effectiveness in business education courses teaching. Some benefits of the teaching technique as identified by the study include; opportunity to identify the rate of assimilation of business education students, and improved capability of business education students for problems identification and evaluation. The identified problems as they are related to business education from the study include; that naturally, teaching skills will definitely differ from one business education lecturer to another. In view of this, a highly skillful and competent teacher with high level of subject matter mastery will surely prove his worth during instruction delivery. As such, the students might prefer his lesson to that of his counterpart who lacks teaching skill and without required level of subject matter mastery. This unhealthy situation will in no doubt result in psychological division of the class by the students, and cause inferiority complex, dejection, frustration, and academic imbalance on the part of the incompetent lecturer. The study recommended that business education courses should be allocated to lecturers based on their options and specialty so as to enhance a high level of subject matter mastery on the part of the paired teachers, it also recommended that paired business education lecturers for collaborative teaching should agree at the speed that the shared course outline should be going so that students' level of assimilation will not be negatively affected.

Introduction

According to Babalola (2018), teaching and learning is a key factor in education which enhances imparting of knowledge to learners in order to cause a positive and permanent change in learners for individual and societal needs. To achieve this, several methods and strategies have been adopted in the classroom to deliver instruction and

specifically for learners to understand the lesson for better performance, such teaching methods include; teacher – centered, learner – centered, content – focused, interactive/participative and collaboration. The joy of every teacher is to deliver instruction that will bring about positive changes in their learners in order to serve as a proof of achieving the stated behavioural and content objectives of any lesson taught.

In view of the above, the use of any one or combination of these teaching methods for successful instruction delivery depends largely on many factors such as the learning environment, educational policies, teachers' instruction delivery ability, students' readiness and content planning and arrangement. However, this study is conducted to examine collaboration teaching of business education in colleges of education in south west Nigeria.

Villa et al (2018) defined Collaborative teaching as a learning situation where two or more teachers are sharing teaching responsibility to educate students in a classroom. Collaborative teaching technique involves the distribution of teaching activities between two and three teachers in which the course contents are divided between the teachers for planning, instruction, and evaluation of students. In collaborative teaching, every teacher assigned to teach the same course would separately prepare a lesson plan for whatever topic assigned to him to teach from the course contents but the summative evaluation would be jointly carried out by all the assigned teachers in order to achieve what is known as instruction control.

Collaborative teaching method is also called co-teaching or team teaching, which has been around for quite a while. It first gained popularity in the 1950s, and then evolved during the 1960s before becoming widespread in the early 1970s, particularly in the open – plan primary schools, before enjoying something of resurgence in the 1980s. Collaborative teaching goes hand in hand with collaborative learning for the purpose of attaining instructional objectives.

In this respect, Iloval, Khattami – Kermanse – shali & Local (2014) said that Collaborative learning can be described as a situation where some group of students gather together to learn about a particular thing in relation to their course of study. This is quite different from individual learning because it involves relying on one another's resources, potentials and skills, in which information are being asked and given, ideas are being shared and evaluated and one another's work is being monitored. Collaborative learning lays more emphasis on the fact that knowledge can be created among group of students with no exception to business education students through their interactions and sharing of experience. It emphasizes on processes that include student's discussion and their active engagement with the subject in a group setting that can be monitored by a teacher.

For years, teaching and learning has been on with little or no disturbance of any kind in the Nigerian education sector until towards the tail end of year 2019 and early 2020 in the 21st century when there was an outbreak of a deadly disease called coronavirus 2019 or covid 19. The said disease ravaged the whole world and sent millions of people to their early grave to the extent that no nation in the entire world was spared from the corona pandemic.

In this regard, Nigeria as sovereign state has her own share of the global health crisis to the extent that substantial percentage of Nigerian human resources in the Nigerian economic sector was ravaged by the disease. In view of this, the economic sector of Nigeria was short down by both the state and federal government of Nigeria for months. The short down of the nation's economic sector however resulted in total crippling of the nation's education sector because students at all levels of the sector were given a sit at home order which put a halt to teaching and learning activities for a whole academic session. The order was given by the government so as to serve as a measure to curb the fast spread of the deadly virus.

Adeyemi (2020) observed that although, during the lockdown, some educational institutions made efforts to organize electronic class through internet which allowed teaching and learning to take place outside the classroom setting but observers' statistics revealed that this alternative teaching and learning method was not too effective due to the fact that Nigerian education sector does not have modern and enough internet facilities to put in place for meaningful electronic class objectives attainment. By and large, business education as an academic field also became a victim of ineffective electronic class during the aforementioned period because only little or nothing could be achieved in business education instructions from the e-class during the lockdown period.

Now that the lockdown is over, students have resumed back to schools and classrooms, and instructions have begun, therefore, the necessary steps or strategies to adopt in instruction delivery to make up for the teaching and learning losses during the pandemic lockdown is now a major concern to all the stakeholders in business education in colleges of education so as to serve as a means of reviving the instructional process of the programme. In respect of this, the study intends to critically look at the various benefits that collaborative teaching and learning method as a viable teaching technique may offer to revive instruction delivery in business education in post covid 19 era, and likely challenges it may confront, and the steps that must be taken to proffer solutions.

Benefits of Collaborative Teaching Technique in Business Education at Post Covid 19 Era.

The following benefits have been identified by various scholars in business education as they have positively affected business education programme in colleges of education in Nigeria at post covid 19 era.

c. Identifying the rate of assimilation

In view of the above, Okanlawon (2020) asserted that lecturers/teachers of business education should come together and examine how teaching collaboratively can have positive impact on business education students' learning and outcome. In view of this, if business education tutors in colleges of education can adopt collaborative teaching and learning technique of instruction, it is likely that there will be more room for business education lecturers to identify the rate of assimilation of their students in a co – taught classroom, which will help to engage them thoroughly towards achieving improved academic performance most especially, during and after covid19 era. This is because most lost grounds by business education students during the lockdown would be covered with

the team teaching method. This will eventually create an enabling environment for business education students' rapt attention from different teachers taking them the same course for more understanding in a variety of instructions towards achieving increased emphasis on cognitive strategies and study skills, social skills and improved classroom communities.

d. Improved capability for problems evaluation

Akande (2020) pointed out that team teaching method for business education courses in this post covid 19 era will likely result in business education students' improved capability to evaluate problems critically, argue substantively, and to apply effectively learned concepts to new situations or context. Also, the teaching method in question may bring out constructive criticism among business education lecturers in the face and post covid19 era which may later transform instruction delivery to a participative activity with critical review that will ensure quality assurance for better implementation of business education programme.

e. Tendency of curriculum coverage.

Okafor (2019) asserted that collaborative teaching technique is an instructional situation where a group of teachers forms a team to give instruction or teach business education students in a business education classroom setting. Hence, When two or more business education lecturers do combine together for a course in order to plan, teach, assess and take responsibility for business education students, taking an equal sharing of responsibility, leadership and accountability in a classroom setting during and after covid19 era, there is high tendency that more grounds or content areas will be covered in business education minimum standard, and the standard and goals of business education programme industrially, vocationally and economically will be easily attained. Not only this, the contribution of business education programme at the college of education level to the growth and development of Nigerian economy can be positively felt by all and sundry and without having much feeling of the academic effect of covid19.

Adenekan (2017) also identified the following benefits that business education programme can enjoy if co-teaching is adopted in delivering instructions in her courses in colleges of education in the south-west Nigeria.

- 1. Flexibility and creativity in instructional time usage.** The use of instructional time becomes flexible among business education teachers in collaborative instruction method. This is because individual teacher assigned to teach a subject together with one another takes time to plan his or her lesson, deliver the instruction and evaluate the lesson within the time frame allotted for that course on the departmental time table. The teacher also makes provision for extra class if a particular topic taught is not covered in a single lesson because he is aware that his counterpart taking other topics will equally strive to cover their areas as a way of covering more loss grounds in business education minimum standard during the school lockdown following the outbreak of corona virus This however, will result in instruction delivery healthy competition that allows natural coverage of the minimum standard towards achieving a good summative evaluation.

2. **Easy identification of students' learning difficulties:** Team teaching enables business education lecturers knowing more about their students learning abilities and discover learning difficulties of many business education students in a single subject which might have emanated from the school lockdown in most part of year 2020 due to corona virus pandemic, unlike when the course is handled by a single lecturer who is autonomous in instruction delivery without any check and balance from other teachers. When the students' learning difficulties are discovered by group of teachers, efforts to proffer solutions will jointly be proffered and invariably give the students soft landing in their assessment and academic progression after covid19 era.
3. **Shared ownership of students' learning and academic success.**
Collaborative teaching method in business education programme encourages business education lecturers to do whatever it may professionally cost them like time, efforts, research, and at times personal money to procure needed instructional materials that will enable them put in their best towards ensuring that stated objectives of every lesson taught and those of the entire course are maximally attained in spite of academic time loss caused by covid19 school lockdown. This is because they are all aware that the success or failure of any of the students will be attributed to every one of them taking the course. As such individual lecturer taking the same course is naturally made to be on his or her toes to perform maximally for the achievement of a common goal.
4. **Decreased teacher isolation, increased support and feeling valued by colleagues**
Collaborative teaching method in business education at post covid19 era will definitely result in decreased teacher isolation and increased support for each other. Since a single course will now be handled or taught by two to three lecturers, there is tendency that ideas and knowledge in different areas or content of the course will be shared among colleagues which will naturally lead into giving each other the required support for the success of instruction delivery and assessment in the course that binds them together which also will eventually and naturally make business education lecturers value and appreciate each other.
5. **Increased energy and greater enjoyment from teaching.** Team teaching in business education after covid19 era will in no doubt result in increased energy and teaching enjoyment on the part of business education lecturers. This is because the joint teaching success achieved by a team of business education teachers through collaborative teaching will serve as a motivational factor that will encourage them to put in more efforts towards achieving more instruction delivery at post covid19 era and make the teachers enjoy teaching more. When this happens, it will amount to unveiling the teaching potentials and traits of professionalism in business education lecturers.

Challenges of collaborative learning at Post Covid19 era.

Business education Scholars and experts are of the opinion that, creating a collaborative classroom can be a wonderful rewarding opportunity at post covid19 era, but it is also full of challenges and dilemmas. In view of this, Akinyele (2019) identified the following problems of the teaching method as they have affected instruction delivery in business education programme in colleges of education in Nigeria after corona pandemic era.

Teachers need to go at different speeds

In team teaching in business education there is no doubt that lecturers may likely deliver their instructions at different speeds. Therefore, while working at different speed, there is possibility that a lecturer is either slowed down or forced to catch up faster than he /she would have liked to. In the same vein, a lecturer may go too fast for some students he is taking while this set of business education students will feel lost and be left with the option of note taking. On the other hand, the fast learners in the class will prefer the class and instruction of other lecturer that meets learning speed demand. However, if this is known to these lecturers it may result in unhealthy rivalry that may distort the attainment of collaborative teaching technique that is ought to improve instruction in business education programme. Also, working at different speeds of the lecturers may slow down the minimum standard coverage within required limited time allotted for the course.

Exhibition of different teaching skills. Naturally, teaching skills will definitely differ from one business education lecturer to another. In view of this, a highly skillful and competent teacher with high level of subject matter mastery will surely prove his worth during instruction delivery. As such, the students might prefer his lesson to that of his counterpart who lacks teaching skill and without required level of subject matter mastery. This unhealthy situation will in no doubt result in psychological division of the class by the students, and cause inferiority complex, dejection, frustration, and academic imbalance on the part of the incompetent lecturer. This might further reduce his level of low productivity and invariably cause him speed progression on the job in terms of promotion.

Domineering factor in team teaching and learning.

In this scenario, a senior business education lecturer may decide to take over all the interesting and juicy topics in the course outline and leaving the most difficult and challenging ones to the junior colleague attached to him as a team member to co-teach a course. This is unfair because the junior colleague may not be experienced enough to handle these vital areas and if he manages to teach it, business education students will only be at the mercy of his competence and subject matter mastery level which may not be good enough to handle such difficult areas in the minimum standard. To further worsen the situation, the blame of business education students co-taught the course. This happening does not encourage and motivate junior business education lecturer and it also has an advert effects on the attainment of business education programme objectives through collaborative teaching method

Wrong allocation of business education courses

Team teaching in business education would have been so wonderful and rewarding if courses allocated to team lecturers are optionally relevant. Observations show that in some business education departments in colleges of education, courses are allocated to lecturers without considering their areas of specialization, such as; office and technology and management, accounting, entrepreneurship, and marketing. A situation where an accounting course is to be co-taught, and the course is allocated to a specialist in marketing and another in accounting, hence, there is no way that the two of them would perform equally. This is because one is a specialist in accounting but the other is not, definitely, the accounting specialist will always have inspiring and wonderful instructions while his marketing counterpart may not. Until this abnormality is corrected, team teaching may not be effective in business education programme at the college of education level.

Joint failure sharing. In co-teaching in business education, if a lecturer who is good, sound, and vibrant in instruction delivery with fantastic level of competence is paired alongside a lazy and incompetent one, there is no doubt that no tangible result will be achieved. This is because while the skilled, competent and vibrant lecturer is performing maximally in instruction delivery, the incompetent one will be busy skipping challenging topics in the course outline. However, when students fail, the two of them would be apportioned blame. This may invariably demoralize and demotivate the competent lecturer.

Johnson et al (2017) identified five (5) factors that must be given serious consideration towards enhancing quality collaborative learning among business education students at the college of education level:

1. **Clearly perceived positive independence:**

Business education students that form a class or learning group should inculcate the habit of relying on each other, believe in one another, and encourage team spirit to rule among them so that their common goal of academic exercise for which they gather to attain can be easily achieved. To achieve any learning goal, every business education in the group has one role or the other to play and failure for anyone to play his or her role maturely and seriously with all concentration may make their activities 'efforts in futility'. To achieve main goal of the group academically it is advisable that all exercises activities.

2. **Considerable Interaction:** Business education students that form a learning group they understand to themselves as a way of gathering and sharing knowledge. In addition, group members must be done interactively, providing each other with feedback, drawing challenging conclusions and reasoning.

3. **Individual Accountability and Personal Responsibility:** All business education students in a learning group would be accountable for their share of work and for all materials to be learned, as such, seriousness and concentration are required of them.

4. **Social skills:** To achieve a meaningful collaborative learning among business education students, business education lecturers should be in position to encourage the group towards acquiring ability and potentials to develop and practice trust – building, leadership, decision making, communication and skill management that will encourage more understanding among them.
5. **Group self - evaluating:** Business education students in learning group should set group goals, assess periodically what they are doing as team, and identify the changes that should be made in future for further learning improvement.

Conclusion

There is no doubt that the first wave of covid19 that ravaged the whole world between 2019 and major part of 2020 caused a lot of damages to educational sector of Nigeria, most especially in the area of teaching and learning when the Nigerian government ordered a compulsory lock-down of all categories of educational institutions in the country. However, when schools were finally opened, delivery of instruction became paramount so that lost grounds in various academic programme of which business education is one, can be covered with little or no itches. Following this, Collaborative teaching technique is perceived by this study as a very good teaching method to solve instructional delivery problem caused by covid19 pandemic. This is because the teaching technique is an instructional method that involves two or more teachers to plan, instruct and evaluate the whole process of teaching approach in a single course in order to lead to learners improved capability, to evaluate teaching and learning problem critically, argue substantively and to apply effectively learned concepts to new situation or context. There are numerous potential benefits of collaborative teaching discovered by the study which include: social, academic, psychological and assessment advantages that stand the chance of serving as vital teaching tool that can bridge the gaps or vacuum in loss of learning period. However, having identified numerous advantages that are accrued to co-teaching along with its few challenges, the study is hereby concluding that for business education programme to maintain its identified standards and maximally attain its overall vocational, industrial and economic objectives, contributions of collaborative teaching method must not be undermined in business education instruction delivery most especially at post covid 19.

Recommendations. As suggestions to proffer solutions to some identified problems in the study, the following recommendations are hereby made

1. Paired business education lecturers for team teaching should agree at the speed shared course outline should be covered so that students' level of assimilation will not be negatively affected.
2. Different teaching skills in paired business education teachers should be exhibited objectively only, just for the purpose of attaining collaborative teaching method but not to spite or ridicule one another in their bid to deliver instruction.

3. Senior business education lecturers in a paired teaching team should allow fairness and equity when sharing the course outline with their junior colleagues so that domineering factor will not set in.
4. Business education courses should be allocated according to individual lecturer's option or area of specialization in business education programme so that no lecturer will feel inferior to another when they are paired together to co-teach a particular course.
5. Apportioning blames on students' poor performance from collaborative teaching should only be for the lazy and incompetent lecturer that caused it while competent one should be exonerated from the blame so that the latter can continue to always put in his best.

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PERCEPTION OF VOCATIONAL AND NON-VOCATIONAL EDUCATORS ON IMPLEMENTATION OF ENTREPRENEURSHIP STUDIES IN PRIMARY SCHOOL CURRICULUM AND PUPILS' ENTREPRENEURIAL AWARENESS IN LAGOS STATE

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Abstract

Nigeria is having the challenges of poverty and unemployment and sustainable solution requires both short-term, medium term and long term approaches (attitudinal change). This paper examined the perception of vocational and non-vocational educators on implementation of entrepreneurship studies in primary schools and pupils' entrepreneurial awareness in Lagos State. Descriptive design of the survey type was employed. Population consisted of 1099 vocational educators and non vocational educators in Epe and Ibeju-Lekki Local Government Areas of Lagos State while simple random sampling technique was used to select 145 respondents (58 vocational educators and 87 non-vocational educators) from the entire population. Structured questionnaire developed by the researchers and validated by experts in the field of measurement and evaluation was the source of data collection. Data collected were analyzed using mean and standard deviation to answer the research questions, while t-test statistical technique was used to test the hypotheses at 0.05 level of significance. The finding of the study revealed that implementation of entrepreneurship studies in primary schools would influence pupils' entrepreneurial awareness in Lagos State. The findings also revealed that implementation of entrepreneurship studies in primary schools would make pupils to develop positive attitude towards entrepreneurship studies right from the elementary stage. Based on these findings, it was recommended that government should adopt an effective strategy in the implementation of entrepreneurship studies in primary schools to make the young pupils aware of entrepreneurship traits and values as well as arouse the pupils' interest towards entrepreneurship.

Key words: Implementation, Entrepreneurship Studies, Entrepreneurial Awareness, Attitude Formulation

Introduction

Nigeria is currently undergoing economic turbulence. This is evident in the level of unemployment among Nigerian youths as many of them were roaming the street with no hope of survival. Various local, national as well as international bodies report and positions on the state of Nigerian economy and its unemployment level underscore the urgency to find lasting solution to Nigerian present predicament. As reported by Nigerian Bureau of Statistics (NBS, 2021) for example, Nigerian unemployment rate increased to all time high of 33.3% in the third quarter of 2021. The incessant increase in unemployment rate over the years if not abated is an indication of what to expect in the future. According to Doyin Salami, Chairman of the Presidential Economic Advisory Council (PEAC), Nigerian unemployment rate is projected to increase to 40 percent by the end of 2021 (Businessday September 21, 2021).

The International Monetary Fund (IMF, 2021) stated that the country is at a critical juncture, due to a weak pre-crisis economy that is associated with low per capital income, high inflation rate (2 digit), obvious governance vulnerabilities and limited buffers. About 83 million people, representing 40% of the masses live below the poverty line while vulnerable people, many of whom could fall into poverty line because of Covid-19 pandemic amounted to 53 million, representing 25% of the populace (World Bank, 2020). Consequently, there is rise in social vices across the country that requires urgent need for reforms and policy adjustment to manage the situation in order to avoid its long-run effect, which could be more disastrous. While there is the problem of Bokoharam and Banditry in the North East and North West especially in Borno, Yobe, Adamawa and Kaduna States, Herders / Farmers' clashes and Kidnapping is ravaging in the North Central and South West especially in Benue, Niger, Oyo and Ogun States. In the South-South and Southeast, Militancy, pipeline vandals and secessionist agitators are posing threat to the growth and development of the country on a daily basis especially in Delta, Rivers, Bayelsa and Imo States respectively.

The myriad of challenges facing Nigeria as a country is not unconnected with unemployment and abject poverty among the citizenry because an adage says that "an idle hand is a devils' workshop". Therefore, sustainable solution to these problems requires both short-term, medium term and long-term approaches. While the short-term approach has to do with putting food on the table of the most vulnerable ones, the medium-term approach relates with creating employment opportunity for citizenry as well as an enabling and conducive environment for prospective investors and employers of labour. However, the long-term approach has to do with mind changing and attitude formation orientation and programmes that will make people aware of the viable and sustainable route to becoming an industrialist, employer and self-reliant citizens.

The Federal Government of Nigeria has been adopting various short and medium term approaches to tackle the menace of unemployment and poverty in Nigeria through palliative measures and Social Investment Programmes (SIP), i.e. Conditional Cash Transfer (CCT), Trader's Money, Farmers' Money, Anchor Borrowers Programme (ABP), N-Power and National Home Grown School Feeding Programme (NHGSFP). However, the long-term approach, which requires attitude formation and direction of interest towards

entrepreneurship as the only means of becoming a self-reliant citizen is not given its desired attention.

Ajagbe (2014) considers entrepreneurship studies to be a way of providing the learners with the knowledge, skills, and motivations that will encourage them succeed in entrepreneurial activities in a variety of settings. Therefore, It is indeed an important aspect of lifelong learning. That is, the studies will be able to offer to the learners the tools that will enable them think creatively, analyze a business idea objectively, solve problems effectively, and contribute optimally to the society irrespective of age, gender, and ethnicity. According to Bubou and Okrigwe (2011), the benefit of entrepreneurship studies is to make learners feel more confident about setting up their own business since it is oriented towards different ways of realizing opportunities.

Studying entrepreneurship would provide learners with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings (Ajagbe, 2014). Koko and Ikpesu (2009) quoting Onstenk opined that even if entrepreneurship studies does not turn learners into entrepreneurs, it will create awareness in them and prepare them better for future challenges. Therefore, entrepreneurship studies is a learning experience that makes learners to acquire requisite knowledge, skills and attitude needed to explore the world and contribute meaningfully towards solving the problem of unemployment and poverty. Through entrepreneurship studies, learners are prepared to identify their future prospects in life and be able to pursue that vision.

The role of primary education in the formation of attitude and direction of interests towards entrepreneurship studies as the sustainable means of overcoming unemployment and poverty in the long-run cannot be over emphasized. According to the National Policy on Education (FRN, 2012), primary education is the education given in institutions for children aged 6 -11 plus. The primary education is the first six years of the nine years of basic education using the Universal Basic Education (UBE) standard. This stage of education is often addressed as elementary education and it relates to the development of children's cognitive at early age.

In the early years of life, we may lay the foundations for dependency or self-reliance, poverty or riches, idleness or industry, employees or employers by the type of orientation and awareness of children while in primary school. This is why there has been general outcry for the inclusion of entrepreneurship studies in primary school curriculum, to make the young children aware of entrepreneurship right from primary school level. Udoh and Akpan (2014) opined that school programs especially the elementary schools needs to be relevant, practical and comprehensive and that interests and abilities should influence pupils' choice in the acquisition of appropriate skills, abilities and competences needed to live peacefully and contribute meaningfully to the societal growth and development.

The National Education Research and Development Council (NERDC), acceding to the quest for qualitative basic education in Nigeria by concerned stakeholders introduced entrepreneurship studies into senior primary school curriculum (primary 4 – 6) in 2013 with the sole motive of creating changes by catching them young (NERDC, 2014). This study seeks to examine how the teaching of the subject when eventually implemented

would influence the mindset of pupils in entrepreneurial activities, which is one of the viable and sustainable solutions to the present Nigeria predicament.

Research Questions

The following questions were raised to guide the study:

- i. Why would implementation of entrepreneurship studies in primary school influence pupils' entrepreneurial awareness in Lagos State?
- ii. Why would implementation of entrepreneurship studies in primary school influence pupils' attitude towards entrepreneurial activities in Lagos State?

Research Hypotheses

The following hypotheses were tested at 0.05 level of significance:

- i. There is no significant difference in the perception of vocational and non-vocational teachers as regards implementation of entrepreneurship studies in primary school and pupils' entrepreneurial awareness in Lagos State.
- ii. There is no significant difference in the perception of vocational and non-vocational teachers as regards implementation of entrepreneurship studies in primary school and pupils' attitude towards entrepreneurial activities in Lagos State.

Methodology

Non-experimental design involving descriptive design of the survey type was employed for the purpose of this study. Population consisted of 138 and 97 vocational educators as well as 558 and 306 non vocational educators in Epe and Ibeju-Lekki Local Government Areas of Lagos State respectively, making 1099 in total. In order to give all the eligible respondents equal chance to participate in the study, simple random sampling technique was used to select 58 vocational educators and 87 non-vocational educators, making 145 respondents in total as shown in table 1 below:

Table 1: Selection of Respondents

S/N	Local Govt. Edu. Authority (LGEA)	Number of Schools	Vocational Teachers	Participants	Non-Vocational Teachers	Participants
1	Epe	74	138	34	558	56
2	Ibeju-Lekki	40	97	24	306	31
Total		114	235	58	864	87

Source: *Epe and IbejuLekki Local Government Education Authority (LGEAs)* Structured questionnaire developed by the researchers and validated by experts in the field of measurement and evaluation was the source of data collection. The reliability of the instrument was determined by administering 10 sets of questionnaire to 10 vocational teachers, who were not part of the main study. Their responses were subjected to Cronbach Alpha method, which yielded the coefficient alpha value of 0.82. The instrument was administered to the respondents by the researchers, with the help of two trained research

assistants for a period of three weeks. Out of the total questionnaires distributed, 134 respondents responded and returned their questionnaires representing 92% of the sample size. The data collected from the respondents were analyzed using mean and standard deviation to answer the research questions, while t-test statistical technique was used to test the hypotheses at 0.05 level of significance. The decision rule for answering the research questions was based on any calculated mean scores equal to, or greater than 2.50 was regarded as agreed, while any calculated mean scores less than 2.50 was regarded as disagreed. Furthermore, if the t-value is less than or equal to t-calculated, the null hypothesis is not retained, but if the t-value is greater than t-calculated, the null hypothesis is retained.

Results

Research Question 1: Why would implementation of entrepreneurship studies in primary school influence pupils' entrepreneurial awareness in Lagos State?

Table 2: Mean Response of Vocational and Non-Vocational Educators on Implementation of Entrepreneurship Studies in Primary School and Pupils' Entrepreneurial Awareness in Lagos State

S/N	Statement	SA	A	D	SD	Mean	SD
1	Implementation of entrepreneurship studies in primary schools would make the young pupils aware of entrepreneurship traits and values.	73 (54.5%)	46 (34.3%)	7 (5.2%)	8 (6%)	3.37	0.83
2	Implementation of entrepreneurship studies in primary schools will arouse the pupils' interest towards entrepreneurship.	58 (43.3%)	69 (51.5%)	4 (3%)	3 (2.2%)	3.36	0.65
3	Implementation of entrepreneurship studies in primary schools is the best way for aiding pupils' awareness in Arts and Crafts.	75 (56%)	51 (38%)	6 (4.5%)	2 (1.5%)	3.49	0.65
4	Pupils' awareness in buying and selling can be facilitated through the teaching of entrepreneurship studies at the primary school level.	61 (45.5%)	60 (44.8%)	9 (6.7%)	4 (3%)	3.33	0.73
5	Teaching of entrepreneurship studies in primary schools will make students aware of principle of trade and commerce.	81 (60.5%)	46 (34.3%)	4 (3%)	3 (2.2%)	3.53	0.67

Table 2 reveals that 88.8% of the respondents agreed that implementation of entrepreneurship studies in primary schools would make the young pupils aware of entrepreneurship traits and values with mean rating of 3.37. Also, 94.8% agreed that implementation of entrepreneurship studies in primary schools will arouse the pupils' interest towards entrepreneurship with mean rating of 3.36. Furthermore, 94% of the respondents also agreed that implementation of entrepreneurship studies in primary schools is the best way for aiding pupils' awareness in Arts and Crafts with the mean rating of 3.49. Similarly, 90% of the respondents agreed that pupils' awareness in buying and selling can be facilitated through the teaching of entrepreneurship studies at the primary school level with the mean rating of 3.33. Finally, 95% of the respondents agreed that teaching of entrepreneurship studies in primary schools will make students aware of principle of trade and commerce with the mean rating of 3.53. This implies that implementation of entrepreneurship studies in primary schools would influence pupils' entrepreneurial awareness in Lagos State.

Research Question 2: Why would implementation of entrepreneurship studies in primary school influence pupils' attitude towards entrepreneurial activities in Lagos State?

Table 3: Mean Response of Vocational and Non-Vocational Educators on Implementation of Entrepreneurship Studies in Primary School and Pupils' Attitude towards Entrepreneurial Activities in Lagos State

S/N	Statement	SA	A	D	SD	Mean	SD
6	Primary schools pupils will embrace the teaching of entrepreneurship studies in primary schools.	64 (47.8%)	52 (38.8%)	16 (11.9%)	2 (1.5%)	3.33	0.74
7	Primary school pupils' inquisitiveness will make the teaching of entrepreneurship studies easier for primary school teachers.	72 (53.7%)	61 (45.5%)	1 (0.7%)	0 (0%)	3.53	0.51
8	Primary school pupils will love to participate in creative activities.	62 (46.3%)	68 (50.8%)	1 (0.7%)	3 (2.2%)	3.41	0.63
9	Primary school pupils would like to be involved in practical aspects of entrepreneurship lessons.	81 (60.4%)	45 (33.6%)	4 (3%)	4 (3%)	3.51	0.70
10	Primary school pupils would develop positive attitude towards entrepreneurship studies if implemented in primary schools.	72 (53.7%)	59 (44.0%)	2 (1.5%)	1 (0.8%)	3.51	0.57

Table 3 reveals that 86.5% of the respondents agreed that primary school pupils would embrace the teaching of entrepreneurship studies in primary schools with mean rating of 3.33. Also, 99.3% agreed that primary school pupils' inquisitiveness will make the teaching of entrepreneurship studies easier for primary school teachers with mean rating of 3.53. Furthermore, 97% of the respondents also agreed that primary school pupils would love to participate in creative activities with the mean rating of 3.41. Similarly, 94% of the respondents agreed that primary school pupils would like to be involved in practical aspects of entrepreneurship lessons with the mean rating of 3.51. Finally, 97.8% of the respondents agreed that primary school pupils would develop positive attitude towards entrepreneurship studies if implemented in primary schools with the mean rating of 3.51. This implies that implementation of entrepreneurship studies in primary schools would make pupils to develop positive attitude towards entrepreneurship studies right from the elementary stage.

Hypothesis One (H₀₁)

There is no significant difference in the perception of vocational and non-vocational teachers as regards implementation of entrepreneurship studies in primary school and pupils' entrepreneurial awareness in Lagos State.

Table 4: T-Test Analysis of the Perception of Vocational and Non-Vocational Teachers as Regards Implementation of Entrepreneurship Studies in Primary School and Pupils' Entrepreneurial Awareness in Lagos State

Variables	Mean	SD	N	F	t-cal	t-table	Decision
Vocational Educators	16.89	.320	55	132	-7.160	1.960	Retain H ₀₁
Non-vocational Educators	17.56	.640	79				

Table 4 indicates that the table value of 1.960 at 0.05 level of significance with degree of freedom of 132 is greater than the calculated value of -7.160. Therefore, the null hypothesis was thereby retained. This implies that there is no significant difference in the perception of vocational and non-vocational teachers as regards implementation of entrepreneurship studies in primary school and pupils' entrepreneurial awareness in Lagos State.

Hypothesis Two (H₀₂)

There is no significant difference in the perception of vocational and non-vocational teachers as regards implementation of entrepreneurship studies in primary school and pupils' attitude towards entrepreneurial activities in Lagos State.

Table 5: T-Test Analysis of the Perception of Vocational and Non-Vocational Teachers as Regards Implementation of Entrepreneurship Studies in Primary School and Pupils' Attitude towards Entrepreneurial Activities in Lagos State

Variables	Mean	SD	N	F	t-cal	t-table	Decision
Vocational Educators	17.13	.598	55	132	-2.984	1.960	Retain H ₀₂
Non-vocational Educators	17.39	.411	79				

Table 5 indicates that the table value of 1.960 at 0.05 level of significance with degree of freedom of 132 is greater than the calculated value of -2.984. Therefore, the null hypothesis was retained. This implies that there is no significant difference between the perception of male and female vocational teachers on implementation of entrepreneurship studies in primary school and pupils' attitude towards entrepreneurial activities in Lagos State.

Discussion of Findings

The finding of the study revealed that implementation of entrepreneurship studies in primary schools would influence pupils' entrepreneurial awareness in Lagos State. This finding support the Koko & Ikpesu (2009), who opined that even if entrepreneurship studies did not turn learners into entrepreneurs, it will create awareness in them and prepare them better for future challenges.

The finding of the study also revealed that implementation of entrepreneurship studies in primary schools would make pupils to develop positive attitude towards entrepreneurship studies right from the elementary stage. This finding supported the opinion of Abderrahman (2016) that teaching entrepreneurship studies at early ages to pupils in primary schools as well as providing them with the adequate exposure to entrepreneurial activities can contribute to instilling the entrepreneurial spirit in them. That is, implementation of the subject could be effective in the formulation of pupils' attitude towards entrepreneurial activities.

Conclusion

As clearly revealed from the findings, implementation of entrepreneurship studies in primary schools would serve as a catalyst for providing long-term and sustainable solution to the perennial problem confronting Nigeria as a Nation. It is a veritable tool for laying a solid foundation for entrepreneurial activity in the mind of the children, who are the leader of tomorrow. Therefore, implementation of the subject in the primary school should be facilitated to compliment the current short and medium term approaches towards total eradication of unemployment and alleviation of poverty compounded by covid-19 pandemic in Nigeria.

Recommendations

The following recommendations are made based on the findings of the study:

1. Government should adopt an effective strategy in the implementation of entrepreneurship studies in primary schools. This would make the young pupils aware of entrepreneurship traits and values as well as arouse the pupils' interest towards entrepreneurship.
2. Non-governmental organizations and parent forums should complement the effort of the government in the provision of appropriate materials and facilities that will make the pupils to embrace the teaching of entrepreneurship studies in primary schools and formulate good attitude towards the subject

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CHALLENGES OF TEACHING PHYSICAL EDUCATION THROUGH ONLINE RESOURCES DURING COVID-19 ERA

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Abstract

The emergence of corona virus (covid-19) has presented unprecedented challenges for teacher education around the world. In particular, physical education teacher may well suffer the most in the transition from the well-established face-to-face instruction to virtual (online) approach. Many schools and school districts are faced with the challenge of finding the best approaches to deliver distance education including physical education. This informed the researcher to investigate the challenges of teaching physical education. The study adopted a descriptive survey research design. The population for the study comprised all the 25 lecturers in the state tertiary institutions in Kwara State, all the lecturers were used as sample for the study. Two research questions were formulated to guide the study and open ended questionnaire designed in a Yes or No format was used to gather data from the respondents while frequency counts, percentage mean scores were used to analyze the data generated. Finding revealed that majority of the lecturers are making use of online resources to deliver their learning instructions against the traditional method of face-to-face contact with the students. It was also revealed that the online approach is faced with many challenges which hindered its effective use for delivering learning instructions. It was concluded that Covid-19 has led to the implementation of protocols that has changed how teachers teach and communicate with their students and that despite the series of challenges faced by teachers using online teaching efforts were made by teachers to be innovative and technology base literate and that parents were educated to be supportive to their children and wards so that teaching and learning can continue despite the pandemic. Among the recommendations suggested include: The government should increase the funding of education by equipping the schools with technology-based resources to enhance online teaching process among others.

Keywords: Challenges of Teaching P.E, Online resources, Covid-19 Era.

Introduction

Physical education (PE) has been traditionally considered as a practical and hands-on subject in schools, where close proximity and physical contact is common. Significantly, the delivery of physical education has changed because of covid-19

pandemic that ravaged the world. The emergence of covid-19 has caused innumerable changes in the educational arena (Sa` & Serpa, 2020). The pandemic has led to the implementation of protocols that has changed how teachers teach and communicate with students. There is likely to be very limited opportunity to participate in physical education programs during the period, with most people forced to stay at home or adopt isolation protocols to prevent transmission of the virus. It is thus recommended that people should stay active by exercising at home. This situation makes it necessary to rethink education and particularly, physical education (Gonzalez-Calvo et al. 2020).

Physical education (PE) is practiced in particular places and at specific times (Kirk, 2010), and therefore, the emergence of Covid-19 has represented a need to access and analyze the changes of P.E and adopt a current virtual method such as internet, audio and video tape, interactive T.V, electronic board and e-library. (Olaniyi, 2016). The Covid-19 pandemic has presented unprecedented challenges for teacher education around the world. In particular, physical education, teacher education (PETE) may well suffer the most in the transition from the well established face-to-face instruction and environments to virtual (online) ones. Many schools and school districts are faced with the challenge of finding the best approaches to deliver distance education including physical education (PE). While instruction for basic subjects can be adapted for distance learning, less is known about P.E given the space requirements for traditional lessons.

Additionally, social distancing and sheltering at home have decrease opportunities for physical activity. Experts continue to emphasize the importance of a physically active lifestyle for health and stress management, assuming appropriate precautions (WHO, 2020). However, the global community has adapted rapidly by creating online content tailored to different people, from free tutorials on social media, to stretching, meditation, yoga and dance classes in which the whole family can participate. Educational institutions are providing online learning resources for students to follow at home. Many fitness centres are offering reduced rate subscriptions to Apps and online video and audio classes of varying lengths that change daily. There are countless live fitness demonstrations available on social media platforms. Many of these classes do not require special equipment and some feature everyday household objects instead of weights. Such online offerings can serve to increase access to instructors or classes that would otherwise be inaccessible (The Conversation, 2020).

Due to the Covid-19 outbreak, many countries around the world made several attempts to ensure the continuity of learning by using distance learning tools. The infrastructure and facilities of all institutions (primary, secondary, and tertiary) were organized to prevent the epidemic, to minimize the learning losses while the epidemic continues, and to ensure the continuity of learning.

During the Covid-19 physical education practices in some European countries, United States as well as other countries of the world Nigeria inclusive ended and was replaced with online classes with live streaming recorded videos, tasks for students, projects or just links to follow. In Hungary, weekly “movement diaries” was the most common method to motivate students for physical education. In Italy, teachers were invited to teach via online and distance learning methods and others (Bijen & Ferman, 2020).

America Society of Health and Physical Educators supported physical education teachers organizing online materials, video lessons with practical and theoretical contents, webinars about the most popular sport applications and how to teach physical education. In addition, online questionnaires were launched on social media about how to organize the next school year as well as a physical education campaign. Those resources were free and available for all physical education teachers in Italy (European Physical Education Association, 2020).

Consequently, despite the series of measures taken to ensure continuity of our education across the globe, it is marred in Nigeria with series of challenges. Some of the challenges to teaching physical education subjects during Covid-19 include the level of digital learning in Nigeria which is low partly to resistance to change from traditional or analog pedagogical methods to more innovative and technology-based teaching and learning method as well as erratic power supply in our country. Also, most students live in remote environments where they do not have access to the online learning facilities. That is, there are inadequate ICT infrastructure, Inadequate enterprise to handle ICT infrastructure to deliver instruction to students, poor funding of our educational institutions, no additional budget for teachers to move their classes online and many schools are not prepared for online classes and in this case, the burden is placed on the teacher to adapt themselves and their students to a new way of learning (Plitnichenko, 2020). Many families have experienced challenges in accessing technologies, and numerous parents have experienced difficulties in terms of their abilities and availability to support their children in their learning and in the use of technologies. Parents are complaining of lack of money to subscribe data for their children or wards to participate in online classes as well as students' attitude of preferring to use the subscribed data to download and watch films. Also, poor internet supply from the internet providers.

Purpose of this study are:

- i. To examine the teaching of P.E. during Covid-19
- ii. To determine the resources educators are utilizing to deliver P.E. curriculum during Covid-19
- iii. Understand the challenges experienced by physical educators during Covid-19 pandemic.

Research Questions

Two research questions were formulated to guide this study which includes:

1. What are the resources physical educators are utilizing to deliver P.E instructions during Covid-19 Era.
2. What are the challenges experienced by physical educators lecturers using online resources to deliver P.E instructions during Covid-19 pandemic.

Methodology

The study adopted a descriptive survey research design because it examined the challenges of teaching physical education using online resources during Covid-19 era. The

population for the study comprised the physical education lecturers in Government institutions in Kwara State totaling 25. All the entire lecturers were used for the study hence there were no sample. Close ended questionnaire of Yes or No format that was validated by experts and tested for reliability with 0.71 index was used to elicit information from the respondents; frequency counts and percentage were used to answer the two research questions formulated for the study.

Research Question one: What are the resources physical education lecturers are utilizing to deliver P.E instructions during Covid-19 era.

Table 1: Showing the resources physical educators are utilizing to deliver P.E instruction

SN	Resource utilized to deliver P.E instructions	Yes%	No%
1	Online class with live streaming recorded video	21(84%)	4(16%)
2	Distance learning materials e.g. WhatsApp message and video calls	18(72%)	7(28%)
3	Task for students online	20(80%)	5(20%)
4	Webinar about most popular sports application	25(100%)	-
5	Online Questionnaire on social media	17(68%)	8(32%)
6	Project or link to follow	9(36%)	16(74%)
7	Zoom with I.D no and password to join organized lesson or Workshop to learners	21(88%)	3(12%)
8	Video conferencing	19(76%)	6(24%)
9	Google classroom	25(100%)	-
10	Face-to-face contact with the students	-	25(100%)

Table one showed the resources physical education lecturers are utilizing to deliver P.E instructions during Covid-19 era. 21 lecturers representing (84%) said they use online with live streaming recorded video to deliver their instructions and four (16%) said they don't use it, 18 (72%) said they are using distance learning materials e.g. WhatsApp message and video calls while seven (28%) don't use it, 20 (80%) used task for students online while five (20%) did not use it, all the 25 lecturers (100%) subscribed to the use of Webinar about most popular sports application to deliver their instruction, 17 (68%) are using online questionnaire on social media to pass instructions to learners, while eight (32%) did not subscribe to its usage, only nine (36%) lecturers use project or link to follow by students to receive learning instructions while 16 (74%) did not use it, 21 (84%) subscribed to the use of zoom with I.D number and password to join organized lesson or workshop to learners while four (16%) did not use it, 19 (76%) lecturers subscribed to the use of video conferencing while six (24%) did not, all the 25 lecturers (100%) are using Google classroom and finally, no lecturer uses face to face contact with the students. The

results however shows that majority of the lecturers are making use of online resources to deliver their learning instructions against the use of Face-to-face contact with the students.

Research Question two: What are the challenges experienced by physical education lecturers using online resources to deliver P.E instructions during Covid-19 pandemic?

Table 2: Showing the challenges experienced by P.E lecturers using online resources to deliver P.E instructions

SN	Challenges experienced by lecturers using online resources during Covid-19 pandemic	Yes (%)	No (%)
1	Inadequate ICT infrastructures	20(80%)	5(20%)
2	Inadequate expertise to handle ICT infrastructures to deliver P.E Instructions	17(68%)	8(32%)
3	Resistance to change from analog pedagogical method to more technology based teaching method	19(76%)	6(24%)
4	Erratic power supply in the country	25(100%)	--
5	Poor funding of our educational institutions resulting in lack of internet facility, no access to computer among others	23(92%)	2(8%)
6	No additional budget for teachers to move their class online	16(64%)	9(34%)
7	Poor internet supply from the internet providers	21(84%)	4(16%)
8	Parental attitude of complaining of lack of money to provide for their children or wards	22(88%)	3(12%)
9	Poor attitude of students by preferring to use the subscribed data to download and watch films	24(96%)	1(4%)
10	Considerable number of students live in the remote environment without access to internet and electricity	23(92%)	2(8%)

Table two revealed the response of the respondents on the challenges experienced by P.E teachers using online resources to deliver P.E instructions to learners during Covid-19 pandemic. 20 (80%) lecturers stated inadequate ICT infrastructures are some of the challenges experienced by lecturers and five (20%) said no, 17 (68%) said inadequate expertise to handle ICT infrastructures to deliver P.E instructions while eight (32%) did not concur, 19 (76%) stated that resistance to change from analog pedagogical method to more technology based teaching is a challenge while six (34%) said no, all the 25 (100%) lecturers mentioned erratic supply as a major challenge, 23 (92%) mentioned poor funding of institutions resulting in lack of computers and internet supply as a challenge, while three said no, 16 (64%) said no additional budgets for teachers to move their online classes serves as a challenge and nine (34%) did not concur, 21 (84%) lecturers said poor internet supply from the internet providers is a challenge while four (16%) said no, 22 (88%) mentioned parental attitude of complaining of no money to subscribe for their children or wards is a great challenge while three (12%) said no, 24 (96%) lecturers mentioned

students poor attitude of preferring to use the subscribed data to download and watch films is a challenge but one (4%) lecturer did not concur and finally, 23 (92%) said considerable number of students lives in remote environments where access to internet and electricity is a problem while two (8%) said no. The results therefore revealed that majority of the lecturers supported that the aforementioned challenges hindered online teaching during Covid-19 pandemic.

Discussion of findings

The finding of research question one reveals that majority of the lecturers are making use of online resources to deliver their learning instructions against the use of face-to face contact with the students during Covid-19 pandemic. The decision of lecturers to use online approach is in line with Olaniyi (2016) who affirmed that the emergence of Covid-19 has presented a need to access and analyze the changes of P.E and adopt a current virtual methods of disseminating instruction such as internet, audio and video tape, interactive T.V., electronic board and e-library. In addition, the Conservation (2020) also stated that using online offerings to pass instructions to learners can serve to increase access to instructors or classes that would otherwise be inaccessible. He reiterated further to say that many countries around the world made several attempts to ensure the continuity of learning tools and were organized to prevent the epidemic, to minimize the learning losses while the epidemic continues, and to ensure the continuity of learning.

Bijen and Ferman (2020) revealed that during Covid-19 physical education practices in some European countries, USA as well as other countries of the world Nigeria inclusive replaced face-to-face contact approach with the students to online classes with live streaming recorded videos, tasks for students, projects or just links to follow. In Italy teachers were invited to teach via online and distance learning methods and others.

The results of research question two showed that despite the series of measures taken to ensure continuity of our education across the globe it was marred in Nigeria with series of challenges which hindered online teaching during Covid-19 pandemic. The finding is in line with the submission of Plitnichenko (2020) who revealed that the level of digital learning in Nigeria is low partly to resistance to change from traditional or analog pedagogical method, as well as erratic power supply in our country Nigeria. Also most students live in remote environments where they do not have access to online learning facility, that is, there are inadequate ICT infrastructure, inadequate enterprise to handle ICT infrastructure to deliver instructions to students, poor funding of our educational institutions, no additional budget for teachers to move their classes online and many schools are not prepared for online classes and in this case, the burden is placed on the teacher to adapt themselves and their students to a new way of learning.

The author further revealed that many families have experienced challenges in accessing technologies, and numerous parents have experienced difficulties in terms of their abilities and availability to support their children in their learning and in the use of technologies. Parents are complaining of lack of money to subscribe data for their children or wards to participate in online classes as well as students' attitude of preferring to use

the subscribed data to download and watch films and poor internet supply from the internet providers.

Conclusion

It was concluded that the Covid-19 pandemic has led to the implementation of protocols that has changed how teachers teach and communicate with their students and the paradigm of passing learning instructions to learners has shifted from the traditional or analog pedagogical method to a more innovative or technology based methods through series of online approaches.

It was also concluded that despite every effort to continue our educational system in the face of the pandemic through online approach it was marred with series of challenges ranging from poor internet supply from the internet providers, erratic power supply, parents and learners attitudes, poor funding of our schools among others, efforts must be made by teachers to be innovative and technology based literate so that they will be 21st century teachers' that will compete favorably with others across the globe.

Recommendations

The following recommendations were suggested based on the findings of the study

1. The teachers must be trained on the innovative or technology-based teaching methods so that they will be become 21st century teachers that will be able to impart knowledge to learners through online approach in the midst of the global pandemic in order to enhance continuity of our educational system.
2. The Government at all levels as well as school proprietors should equip the schools with the needed online resources such as computers and internet service, distance learning approach, e-library, electronic or smart board as well as interactive T.V. among others to enhance effective online teaching and learning process.
3. Efforts should be put in place to educate parents to support their children and wards through regular data subscriptions, provision of android phone or laptop so that they will be able to take part in online learning.
4. Learners should also have positive attitude towards online teaching and learning process so that the data subscribed for them will be used for the purpose of learning.

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ASSESSING THE EFFECTIVENESS OF MICROTEACHING DURING TEACHER PREPARATION IN POST COVID-19 ERA

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Abstract

This study investigated the effect of micro-teaching during teacher preparation in post covid-19 era. The study adopted an ex-post facto research designs. Three instruments were used to collect data for the study namely: micro-teaching score sheet, teaching practice score sheet and a well-structured questionnaire. Random sample technique was used to select One Hundred and Fifty (150) 300 level students at Federal College of Education, Abeokuta. The Cronbach Alpha was adopted to obtain the co-efficient index of reliability of questionnaire which yielded 0.79. Two research questions were raised to guide the study while two null hypotheses were formulated and tested at 0.05 level of significance. Research questions were analyzed using frequency distribution table, mean and standard deviation while Multiple Regression was used for the hypotheses. Result showed that the two hypotheses were rejected. The findings of the study revealed that microteaching prepared students for teaching practice and also motivated student teachers to be inclined towards the teaching profession. It was recommended that the college management should enhanced and sustain a healthy micro-teaching courses to achieve its objectives in teacher education programme.

Keywords: Micro Teaching, Teacher Preparation, Post Covid-19

Introduction

Education is the bedrock for survival, growth, and development of any society. For an individual to develop physically, socially, morally, intellectually and become an asset or a useful member of his society, he/she needs education. Onocha (2013) claimed that, all human societies need the development of prerequisite skills, knowledge and experience for their growth and preservation. Patel and Mohasina (2011) argued that education is the most important invention of mankind in the area of tools, machines, crafts, medicine and language. Without education, man would have been living just like an animal.

Micro-teaching is a teacher training technique for learning teaching skills. It employs real teaching situation for developing skills and helps to get deeper knowledge regarding the art of teaching. This technique involved the steps of plan, teach, observe, re-plan, re-teach and re-observe and has been in use in most teacher training institutions with a reduced number of students in a class, scope of content, and timeframe, among others. In the view of Patel and Mohasina (2011) micro-teaching is defined as an organized practice teaching which aims at giving instructors confidence, support and feedback. It is a quick, proven and fun way of helping teachers get off to a strong start. It is designed for the training of both pre-service and in-service teachers.

The era of the Covid-19 pandemic that has swept across the world changed the arrangements, habits and the design of lectures that had earlier taken place face-to-face. In Micro-teaching class in higher education, the field of teacher training is usually full of teaching practices and the implementation of Basic Teaching Skills, which is done by seeing face-to-face practice (Kaliopé & Tigran 2020) . However, many innovations are put up in teacher education for improvement during post covid-19. The innovation includes, simulated teaching, programmed instruction and computer assisted instruction which are embedded in micro-teaching practicum. Unfortunately, micro-teaching that is supposed to be a training ground for the adequate teachers' preparation is marred by poor educational policy, lack of equipment and instructional resources, ill equipped staff and lack of infrastructural facilities.

Ryan and Deviney in Cuthbert(2017) highlighted the major purposes of micro-teaching such as providing an opportunity for real classroom teaching, simplifying the complexity of classroom teaching, by reducing time, number of students and amount of content promoting mastering of skills, techniques, methods and syllabus interpretation and developing the skill of student teachers in breaking down content into teachable units. These purposes can be viewed as being in line with the recent guidelines of safety measures in teaching and learning environment in this era of COVID-19.

Ajileye (2012) viewed teaching practice as an exercise that gives the teacher trainees opportunity of putting into practice all they have learnt during their exposure to different kinds of principles and courses. It is the field that permits the application of theoretical aspect to practical. Teaching practice is an indispensable component of teacher education which is capable of making the potential teacher fits well into the teaching profession. The current NCE teacher education programme lays great emphasis on teaching practice. The new NCE standards spell out that teaching practice should be done in the first semester of the third year for a period of six months. The pre-requisite to teaching practice is a pass in micro-teaching. Students who fail micro-teaching shall not proceed on teaching practice. It is essential, therefore, that NCE-Awarding institutions ensure that methodology courses and their related content courses are planned together with micro teaching opportunities and that they are fully covered before teaching practice (NCCE, 2012).

However, Agugbuem in Ajileye (2012) study revealed that the adequacy and efficiency of micro-teaching as a teacher training technique requires a review because it is marred by poor educational policy, lack of equipment and instructional resources, ill-equipped staffs and shortage of infrastructural facilities.

Statement of the Problem

Micro-teaching is a process of transforming theoretical knowledge acquired into practical and excellent performance. Despite the importance given to micro-teaching in teacher education programme, student-teachers are still found in-effective in their teaching and in the use of instructional materials during teaching practice exercise. Student-teachers have doubts about their ability to cope with situations, controlling and managing learners or establishing relationship with the mentor or supervisor.

However, the need for adequate preparation of student teachers through micro-teaching is premised on the fact that inadequate preparation may be injurious to student teachers' competence, self-efficacy and self-confidence which may have negative consequences on students' interest in teaching career and ultimately on quality education service delivery. There is therefore the need to assess the effectiveness of microteaching during teacher preparation in post covid-19 era.

Research Questions

The following research questions are raised to guide the study;

1. To what extent does Micro-teaching influence teaching practice performance of students during teaching practice in Colleges of Education during post covid-19 era?
2. To what extent is microteaching effective in preparing students teachers for teaching practice during covid-19 era?

Research Hypotheses

The following null hypotheses are generated for the study. Micro-teaching has no significant influence on teaching practice performance of Business Education students during teaching practice.

- H₀₁:** significant influence on teaching practice performance of Business Education students during teaching practice.
- H₀₂:** Microteaching has no significant effect in preparing students teachers for teaching practice during post covid-19.

Methods

The study adopted an ex-post facto research designs. Ex-post facto research uses what already exists and looks backward to explain why. This design was deemed appropriate for this study because the students could not be manipulated and had already participated in both micro-teaching and teaching practice, which are among the major variables of this study.

The targeted population of this research work consisted of (150) final year Business Education students registered for the 2019/2020 academic session in Federal College of

Education, Abeokuta, Ogun State. The population served as the sample because they were accessible and not very large in number.

Three instruments were used to collect data for the study namely: microteaching score sheet, teaching practice score sheet and a well-structured questionnaire on a 4 point scale. The questionnaire contained 20 items that sought to generate information on the effectiveness of micro teaching during teacher preparation in post covid-19.

The instrument was subjected to thorough scrutiny by experts in Business Education in TASUED Ijebu-Ode. This is to ensure that it measures the purpose for which it was designed.

The reliability of the instrument was determined by distributing the instrument to 30 respondents who were not part of the sample for pilot study. The Cronbach Alpha was adopted to obtain the co-efficient index of reliability which yielded 0.79.

The data collected was analyzed using frequency distribution table, mean and standard deviation with the following boundary limit.

Response	Category	Point	Boundary limit
Great Extent	GE	4	3.50 - 4.00
Some Extent	SE	3	2.50 - 3.49
Little Extent	LE	2	1.50 - 2.49
No Extent	NE	1	0.50 - 1.49

A mean of 2.50 was taken as the cutoff point and it formed the basis for the decision rule. In addition Multiple Regression was used to test the hypotheses.

Results

Research Question 1: to what extent does Micro-teaching influence teaching practice performance of students during teaching practice in Colleges of Education during post Covid-19 era?

Table 1: Mean responses on the extent microteaching influences teaching practice performance of students during teaching practice in colleges of Education during post Covid-19 era

SN	Influence of Micro-teaching	GE	SE	LE	NE	SD	Remarks on teaching practice
	performance of Students during post covid-19.						
1	Micro-teaching helps student-teachers in developing their confidence before teaching practice	40	70	30	10	3.56	.661 Great Extent
2	Micro-teaching prepares student-teachers for effective use of instructional materials during teaching practice	39	67	67	24	3.49	.700 Some Extent
3	Micro-teaching helps to boost students' mastery of the subject matter during teaching practice	48	78	10	14	3.43	.764 Some Extent
4	Micro-teaching mentally prepares the student-teachers for real teaching.	65	48	27	10	3.44	.745 Some Extent
5	Use of multimedia during Micro-teaching is helpful in understanding the concept taught.	39	71	27	13	3.45	.758 Some Extent
6	Micro-teaching helps student-teachers to acquire appropriate dress sense as professional teachers during teaching practice.	59	49	32	10	3.59	.690 Great Extent
7	Micro-teaching helps student-teachers to be creative and	64	40	35	11	3.46	.722 Some Extent

	dynamic practice.	during	teaching									
8	Micro-teaching exposes student-teachers to the skill of lesson planning before teaching.			73	38	29	10	3.49	.721	Some Extent		
9	Micro-teaching helps student-teachers to present classroom instructions logically and sequentially during teaching practice.			64	42	38	6	3.43	.761	Some Extent		
10	Micro-teaching helps student-teachers to acquire appropriate use of language during teaching practice.			75	40	25	10	3.43	.756	Some Extent		
Weighted Mean								3.47				

Source: Field Survey, 2021

Decision Rule = 2.50 N= 150

Findings from table 1 revealed that Micro-teaching helps student-teachers in developing their confidence before teaching practice. Micro-teaching also helps student-teachers to acquire appropriate dress sense as professional teachers during teaching practice.

Table 2: Mean responses on the influence of micro-teaching on teaching practice performance of students in Colleges of Education during post covid-19 era?

S/ N	ITEMS	GE	SE	LE	NE	N	SD	Decision
1	Micro-teaching enhanced my ability to explain with more clarity when students do not comprehend.	70	45	25	10	150	3.44 .733	Some Extent
2	Micro-teaching developed my ability to examine previous knowledge of the students in order to ascertain the level of understanding of the topic.	60	45	30	15	150	3.43 .751	Some Extent
3	Micro-teaching developed my creativity skill as a professional teacher	65	40	35	10	150	3.30 .810	Some Extent
4	Micro-teaching exposed me to different methods to use in teaching my students.	80	45	5	10	150	3.88 .841	Great Extent
5	Micro-teaching enhanced my ability to evaluate students with tasks that develop their critical, logical and reasoning abilities.	72	48	25	5	150	3.73 .780	Great Extent
6	Micro-teaching increased my knowledge of helping weak students to understand the topic through teach- re-teach method.	70	26	10	40	150	3.38 .798	Some Extent
7	Micro-teaching experience exposed me to the professional method of lesson delivery.	26	65	39	20	150	3.41 .749	Some Extent
8	Micro-teaching exposure made me understand that efficient teacher is one who develops the students in a wholesome manner	67	38	35	10	150	3.42 .791	Some Extent
9	Micro-teaching enlightened me the need to handle a difficult student by showing empathy and counseling	48	60	32	10	150	3.39 .739	Some Extent
10	Micro-teaching developed in me the ability to motivate students for learning	60	50	30	10	150	3.44 .733	Some Extent
Weighted Mean							3.48	

Decision Rule = 2.50

N=150

With a weighted mean of 3.48, table 2 indicated that to a great extent, Micro-teaching exposes student teachers to different teaching methods. Micro-teaching enhances the ability of the students teachers to evaluate their students with tasks that develop their critical, logical and reasoning abilities.

Hypothesis 1: H₀₃:Micro-teaching has no significant influence in teaching practice performance of students during teaching practice during post covid-19 era.

Table 3: Model Summary and Multiple Regression Analysis for the Composite Contribution of Micro-teaching to teaching practice performance of students

Multiple R = .688 ^a , R. Square = .562 Adjusted R Square = .560 Standard Error = 10.199					
Analysis of Variance					
Source of Variance	SS	Df	MS	F	Sig.
Regression	503.034	1	503.034		
Residual	117790.226	1358	86.738	5.799	.000 ^b
Total	118293.260	1359			

a. Dependent Variable: Teaching Practice

b. Predictors: (Constant), micro-teaching

Source: Field Survey, 2021

Tables 3 presents Model Summary and Regression ANOVA Regression. Analysis of results indicate that the model micro-teaching significantly influence teaching practice performance of Business Education students during teaching practice ($R = .688$; $R^2_{adj} = .560$, $F(1, 1358) = 5.799$, $p < .05$). The adjusted R^2 which estimates the variance accounted for by the variable (micro-teaching) and criterion variable (teaching practice performance of Business Education students during teaching practice) is .560 This means that the predictor variable (micro-teaching) contributed to 56% of the variance in teaching practice performance of Business Education students during teaching practice.

Hypothesis 2: Micro-teaching has no significant effect in preparing student teachers for teaching practice during post covid-19 era.

Table 4: Model Summary and Multiple Regression Analysis for the Composite Contribution of micro-teaching in preparing student teachers for teaching practice during post covid-19 era.

Multiple R = .848^a, R. Square = .719

Adjusted R Square = .719 Standard Error = 4.97492

Analysis of Variance

Source of Variance	SS	Df	MS	F	Sig.
Regression	15051.632	3	5017.2107		
Residual	198230.320	1356	146.187	34.320	.000 ^b
Total	199735.953	1359			

Dependent Variable: teaching practice preparation

Predictors: (Constant), Micro-teaching

Source: Field Survey, 2021

Table 4 revealed significant results ($F_{(3, 1356)} = 34.320, p < .05$). The null hypothesis which stated that Micro-teaching has no significant effect in preparing student teachers for teaching practice during post covid-19 era was therefore rejected leading to the conclusion that Micro-teaching, has significant effect in preparing student teachers for teaching practice during post covid-19 era. Table 4 further showed that micro-teaching has effect in preparing student teachers for teaching practice during post covid-19 era accounted for 71.9% of the variance in teaching practice performance of students in Colleges of Education ($\text{Adj. } R^2 = .719$).

Discussion of Findings

Table 1 showed the extent to which micro-teaching influenced teaching practice performance of students during teaching practice in Colleges of Education during post covid-19. The finding from the analysis revealed that to a very great extent micro-teaching influenced teaching practice performance of students during teaching practice. The null hypothesis further revealed that the model micro-teaching significantly influence teaching practice performance of students during teaching practice at post covid-19 era. This finding corroborated Kilic (2010) who found that student teachers improve their teaching behaviours during learner-centered micro-teaching.

Findings in table 2 indicated that micro-teaching is effective in preparing students teachers for teaching practice during covid-19 era to some extent (weighted mean = 3.48). In addition, this finding was in line with the findings of Sabon and Coklar, (2013), Akanbi and Usman, (2014) who were of the view that micro-teaching assist teacher trainees in acquiring teaching skills, confidence, reduction in anxiety and fear, proper class management, selection of teaching goals, preparation of lesson plan, ability of speaking in front of group, selection of proper instructional materials as well as proper time management.

Conclusion

It can be concluded that micro-teaching is effective in preparing student teachers for teaching practice during post covid-19 by building up their confidence, time management skills, teaching skills and style, and has motivated them to become professionals in their field.

Also, it can be concluded that the use of appropriate instructional materials during micro-teaching has helped in the development of student teachers skills. It equally helps to build the skill of public speaking in student teachers and government has a major role to perform in the continuous development of micro-teaching to enable the building of student teachers to become professional teachers.

Recommendations

Based on the findings of the study, the following recommendations are offered:

- i. The college management should enhanced and sustain a healthy micro-teaching activities to achieve its objectives in teacher education programme.
- ii. There is also need for lecturers in colleges of education as well as degree awarding institutions to give serious attention to micro-teaching and extend the same to their students so that they too give a serious attention.
- iii. Regular orientation programmes should be organised for both student-teachers and supervisors on the tenets of micro-teaching in order to achieve the goal of teaching practice as part of teachers' training programme.
- iv. There is need to video record micro-teaching so that student-teacher can see themselves while presenting and take note of the areas of their strengths and weaknesses in the art of teaching.

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ENHANCING THE EFFECTIVENESS OF BUSINESS EDUCATION TEACHING AND LEARNING PROCESS IN POST COVID-19 ERA

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Abstract

Covid 19 pandemic has led to serious distortions of academic activities worldwide. Different approaches by nations to contain the spread of the disease through lockdown and restrictions of movement compelled educational institutions to adopt digital technologies for teaching and learning to continue. As a result, educational units including business education need to develop appropriate strategies to mitigate the effects of covid 19 on learning and re-engineer their process for better performance in post covid 19 era. This paper examines the effects of covid 19 on Nigerian education sector. It posits that the post covid 19 business education should be re-modelled to surmount the challenges posed by covid 19 pandemic. The paper suggests strategies that could be adopted to ensure the effectiveness of business education teaching and learning process in post covid-19 era. It recommends adoption of new technologies in the teaching and learning of business education, and provision of adequate digital learning equipment in business schools among others.

Keywords: Business Education, Post Covid 19 era, Teaching, Learning, Effectiveness.

Introduction

The outbreak of Covid 19 pandemic has affected almost all countries of the world. This pandemic ravaged most countries of the world having adverse effects on economic, social and political life of human beings. Countries around the world put in place different measures to curtail the spread of the virus. Such measures include social distancing, handwashing, wearing of face masks among others. To ensure compliance with these rules, lockdown and stay at home strategies have been adopted to flatten the curve and contain the transmission of the disease (Sintema, 2020). Restrictions of movement led to closure of schools and offices. Primary, post-primary and higher institutions have discontinued face-to-face teaching and learning while most of the schools remain under lock and key. This situation has particularly been of a great challenge to the education system across the world. COVID-19 posed serious consequences for students by depriving them of their fundamental rights to education and exposing them to the risks of child labour, early

marriage, exploitation, and poor academic abilities (Baytiyeh, 2018). The Educational sector has never witnessed such disruption in a colossal manner before (UNESCO, 2020a). UNESCO (2020a) confirmed that, over 1.5 billion students globally which represents 87% of the global student population, were deprived of education. More worrisome is the threat of extended closures which paved way for the need to rethink traditional teaching (UNESCO, 2020b).

The COVID-19 further exposed the worsening educational sector of Nigeria and provided the need to improve on the system which serves as the only panacea to the public amidst coronavirus pandemic. Business education as unit of the overall Nigerian education sector is not spared of the negative effects of covid 19 pandemic. In order to overcome the challenges posed by the wild disease, educational institutions must be resilient and find new ways to continue with teaching- learning activities (Chang-Richards, Vargo, & Seville, 2013). Consequently, there is a need to enhance the effectiveness of business education teaching and learning processes in post covid 19 era to achieve its mission and objectives.

Concept of Business Education

Business education is a part of vocational education that prepares its beneficiary for the world of work. According to Ugwuogo, (2013) business education is a form of vocational education directed towards developing the learner to become productive in teaching, paid employment and self-employment. Ubulom and Enyoghasim (2012) described business education as an aspect of educational process, which provides an individual with the pedagogical and business competencies necessary for teaching of business concepts, knowledge, attitudes, and skills for personal use as an employee or employer and for participation as a business teacher.

Atakpa (2011) defined business education as an embodiment of vocational knowledge and skills needed for employment and advancement in various business careers. Also, Okoro (2013) submitted that business education is that part of the total educational process that provides the knowledge, skills, understanding and attitudes needed to perform in the business world as a producer and/or consumer. Furthermore, business education includes education for office occupation, distribution and marketing occupation, business, teaching, administration and economic understanding.

Okoye (2013) viewed business education as an education program that orientate students in: art of business making (marketing), typing and shorthand skills (currently competing with computer appreciation and operation), service delivery, secretarial jobs, stenography, account clerking, office information system and management. Business education prepares beneficiaries for gainful employment and sustainable livelihood. It plays significant role in the economic development by providing knowledge and skills to the learners, thereby, enabling them to adequately impart knowledge to others, and handle sophisticated office technologies and information systems (Amoor, 2010). It could be deduced from the various definitions that the effectiveness of business education is paramount to the economic development of any nation.

Objectives of Business Education

According to the Association of Business Educators of Nigeria (2017), business education has the following objectives:

- i. Vocational objectives relate specifically to the preparation of students for initial employment, upgrading existing skills and retraining in related business office occupation.
- ii. The exploratory objectives aimed primarily at the middle grades and early high school and this provides opportunities for students to gain information about business.
- iii. The occupational intelligence objectives recognize that all citizens should have an intelligent understanding of the various areas of work in which they can earn a living.
- iv. The economic understanding objective is related to developing economic literacy in all citizens.
- v. The consumer education objective serves a dual role: it promotes both the discriminating use of the services and resources by consumers and corresponding understanding of the consumer viewpoint and how best to serve the consumer.
- vi. The personal use objectives relate to those business courses designed to prepare students for proper execution of their personal business affairs.
- vii. The college preparation objectives recognize that high schools have an obligation to provide background preparation in business as well as to develop skills that provide students with the tools to cope more effectively with college demands

The goal of business education is primarily to produce competent, skillful and dynamic business teachers, office administrators and businessmen and women that will effectively compete in the world of work. Its primary aim is the preparation of people for roles in enterprises such employee, entrepreneur and employer.

Covid-19 Pandemic and Nigerian Educational System

Covid 19 pandemic took the whole world by surprise including Nigeria. The sudden outbreak of the deadly and a highly contagious virus called COVID-19 overwhelmed the entire world such that World Health Organization (WHO) declared it a public health emergency of international concern (Anake, Aloye, Achuen, & Egbe, 2020). The educational sector was largely affected as the imposition of lockdown became prominent in containing the virus.

The school time tables and schedules have changed, and at the resumption of the school after the lockdown, so many grounds need to be covered for the educational system of Nigeria to be able to conform with the global educational standard. Facilities in schools have been underutilized during lockdown, some might have developed faults as a result of not been used for a long period of time. As a result of the Covid-19 social distancing efforts, there has been a large-scale transition to online learning ([Govindarajan & Srivastava, 2020](#)).

The outbreak of the corona virus coupled with the lockdown of schools at various levels of education in Nigeria has served as test for the education technology interventions for teaching-learning activities. According to Dhawan (2020), there was an overnight shift from conventional classrooms into digital learning in order to tackle the conditions and adapt to the changing situations (Akther, 2020). Embracing digital learning prior to the COVID-19 pandemic was more of a choice due to the fact that the digital world was increasingly penetrating the educational domain with technology gradually being used to teach and learn (Nwachukwu, Ugwu, & Wogu 2021). These days, technology adoption is a necessity.

However, there is digital infrastructural backwardness and unpreparedness in most developing nations' educational sectors including Nigeria. This has made it difficult for them achieve continuing education through digital modalities. In fact, learning has become an activity that can be carried out irrespective of time and places amidst the pandemic, with the support of digital tools. (Fullan, 2013 and Hammond, 2013) submitted that this situation provides an opportunity to improve standards, contribute to knowledge-based economies, enrich learning potentials, facilitate personalized learning and in all, transform pedagogy to make it more student-centered in line with the global standard. The challenges posed by covid-19 pandemic requires all educational institutions to develop new strategies for achieving their goals and objectives.

Strategies for Enhancing Effectiveness of Business Education in Post Covid-19 Era

The fallout from covid-19 pandemic indicates that every unit of education must develop appropriate strategies to survive and wax stronger in teaching and learning endeavor. The use of digital technology is a must step in this direction. Onyesom and Utoware (2012) asserted that the emergence of new technologies in teaching and learning has revolutionized the entire education system. However, most teaching and learning in business education is still being done manually. This situation should not continue in a post-covid 19 era due to the immense benefits of digital technology.

The use of digital technologies for learning has generated a lot interest for many years. Portable and lightweight digital devices have liberated learning from being restricted to fixed and predetermined locations. This has really changed the ways that knowledge circulates within societies. In the context of the COVID-19 crisis, interest in mobile learning technologies has grown exponentially. Onyesom (2014) reported that the penetrating influence of new technologies has impacted on the quality and quantity of teaching, learning and research in conventional and distance education system as a result of its quantum benefits. The pandemic affords us an opportunity to create a strong virtual global education program (Whalen, 2020). Hence, embracing digital learning is a necessity. In addition, business educators in covid-19 era must be abreast with the use of digital technologies for improved performance towards realizing the goals and objectives of business education.

Furthermore, UNESCO (2020), submitted that post covid-19 educational institutions need to embrace the following strategies:

- i. The formidable tool of digital technology that enables communication, collaboration and learning across distance must be used as a source of innovation and expanded potentials.
- ii. Educational systems should be capable of valuing their teachers and giving them the conditions for autonomous and collaborative work.
- iii. Teachers must fully assume their role as knowledge enablers and pedagogic guides not to apply ready-made technologies or pre-prepared didactics,
- iv. The move to emergency remote teaching due to Covid-19 provides a discontinuous disruption to business-as-usual.

In line with the foregoing, [Norris and Lefrere \(2011\)](#) identify five stages that educational institutions need to undergo to excel in online learning. *They are: unbundling and re-inventing teaching, learning, assessment and certification; focusing on value, not just quality; changing the use and roles of faculty, mentors and peer-to-peer learning; and transforming business models by: continuously seeking new income streams that can mitigate the need to continuously increase tuition to fill revenue gaps, reducing operational overhead (i.e. new buildings, parking lots, dorms) and other costs, seeking lower price points and; enabling more rapid completion of learning objectives, and reducing the total cost of achieving learning goals.*

Moreover, business education departments must device means of personalizing learning. They should be able to pinpoint the learning needs of the student. Students of business education should be trained to become problem solvers through ethical inquiry and artificial intelligence (AI) ([Letheren, Russell-Bennett, & Whittaker, 2020](#)). The school must realise that the future is not simply about what the answers are but about what problems we wish to solve, given what we know. AI-enabled career planning and management will allow students to receive personalized guidance on how to imagine their professional life.

Conclusion

The emergence of covid 19 pandemic has brought a remarkable challenge to business education delivery. Effective business education in a post covid 19 era should be remodeled through adoption of the discussed strategies for it to be responsive to skills and knowledge needs of students. Digital learning is fundamental to the survival of any education sector in the new learning order. To supply the world market ravaged by covid-19 pandemic with needed human resources, teaching and learning require appropriate re-modelling to produce versatile and dynamic workforce.

Recommendations

In order to make business education more effective in this post covid 19 era, the following recommendations were made:

1. Business Education department must embrace new technologies in teaching and learning process.

2. Adequate digital learning equipment should be provided by relevant agencies for business education departments
3. Learning content of business schools should be reviewed by the Ministry of Education to include new skills for students to be relevant and employable in post-covid 19 era.
4. Efforts must be made by different business schools to encourage the use of new technologies by students.
5. Infrastructural facilities should be expanded by the government and proprietors of institutions to accommodate safe teachers' - students' interaction.

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CHALLENGES OF VIRTUAL TEACHING AND LEARNING IN POST COVID-19 PANDEMIC ERA

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Abstract

The paper investigated challenges of virtual teaching and learning in post covid-19 pandemic era. Two research questions were answered while two null hypotheses were tested at 0.05 level of significance. The descriptive survey research design was adopted for the study. The population of the study comprised 61 lecturers from the five departments of the school of business and management technology, Federal Polytechnic Bali. Sampling was not applied since the population was sizeable to handle. Data for the study was collected using a questionnaire structured on a 4-point rating scale of Strongly Agree, Agree, Disagree and Strongly Disagree with corresponding values of 4, 3, 2, and 1 respectively. The structured questionnaire with 19 items was titled Challenges of Virtual Teaching and Learning Questionnaire (CVTLQ). It was validated by three experts from the school of business and management technology, Federal Polytechnic Bali. Cronbach Alpha procedure was used to determine the internal consistency of the instrument and it yielded a reliability coefficient of 0.79. The 61 copies of the questionnaire were distributed to the respondents, however, only 59 copies were retrieved and used for the study. Mean and standard deviation were used to analyse the data collected on the research questions, while t-test was used to test the hypotheses. The findings of the study identified 11 challenges and 8 solutions of virtual teaching and learning in post covid-19 era. There were no significant differences in the mean ratings of lecturers on 14 out of 19 items, whereas, there were significant differences in the mean ratings of lecturers on the remaining 4 items. The study among others recommended that Management of institutions should provide functional standby generating plant to enhance and ensure stable electric power supply to avoid interruption of lectures when using virtual teaching and learning approach.

Keywords: Challenges, Virtual, Teaching, Learning and covid-19.

Introduction

Challenges post by Corona Virus Disease 2019 (COVID-19) in the educational system is enormous. This is because most institutions of learning in Nigeria has been paying lip service to online teaching and learning system. COVID-19 exposed the weaknesses of Nigerian education system towards adoption of new technologies. When the minister of education after series of meeting with educational stakeholders announced that educational institutions should use virtual teaching and learning during the covid-19 lock down to attend to students, it was only view institutions both in the private and public sector in Nigeria that was able to do that. This made many Nigerian students to be at home for the period of six months without academic activities. Many Nigerians including students, teachers and parents felt the impact, though it was mostly felt by students who had to struggle with academic activities especially as many students wrote examination immediately after the pandemic. The post covid-19 challenges is what is left to be addressed by the government and management of educational institutions in the case of educational system. Covid-19 has made the whole world realise that life and living can take a different shape in a twinkle of an eye, change is a necessary phenomenon therefore, the need to plan for such unforeseen circumstance (s).

Virtual teaching and learning is the process of using technologies such as computer system, internet, zoom and other technologies in the teaching and learning process. Teaching and learning with new technologies application has become important instructional process to enhance accessibility, efficiency and quality of teaching and learning by facilities access to resources and services as well as improve remote exchange and collaboration (Amiaya, 2016). Onojetah & Utoware (2019) assert that the relevance of new technologies in the teaching and learning process, Nigeria has promised to provide facilities and necessary infrastructure for the promotion of new technologies application at all levels of education system, business education in the universities inclusive. A virtual classroom is an online learning environment that allows teachers and students to communicate, interact, collaborate, and explain ideas. A virtual classroom enables students to access quality teachers anywhere on the planet so long as they both have a reliable internet connection. Racheva (2017) describes virtual learning as a learning experience that is enhanced through utilizing computers and/or the internet both outside and inside the facilities of the educational organization. The instruction most commonly take place in an online environment. The author stressed that the teaching activities are carried out online whereby the teacher and learners are physically separated (in terms of place, time, or both). She maintained that distance learning conducted in a virtual learning environment uses electronic study content designed for self-paced (asynchronous) or live web-conferencing (synchronous) online teaching and tutoring. *Virtual learning is defined as learning that can functionally and effectively occur in the absence of traditional classroom environments (Simonson & Schlosser, 2016).*

The post covid-19 challenges in virtual teaching and learning is similar to the challenges of new technologies experienced by educationists in the educational system. Plitnichenko (2020) states that although technology evolution now allows many things we have not believed possible, the shift to e-learning does not go as smoothly as we want it to

be. Facing the pitfalls of digital learning may be discouraging and frustrating both for teachers and students. Onojetah & Utoware (2019) suggest that the challenges of new technology application has led to learners not being adequately exposed to those experiences that will guarantee the total development of their being in the e-world. Ugonu (2019) states that challenges of new technology include among others: epileptic electric power supply. She maintained that epileptic nature of electric power supply and also the high cost of running standby generator is a challenge to virtual learning. According to Oyadongham & Eke (2011) for the past fifteen years, Nigeria has been having difficulties in providing stable and reliable electricity supply to every nook and cranny of the country without success. Constant power failure may constitute a problem to the teachers because this instructional equipment cannot function without electricity. Poor internet network service is another problem that hinders the progress and growth of the use of virtual teaching and learning. Internet service in developing country like Nigeria is poor and sometimes frustrating. One of the major challenges the internet users especially business educators are facing is the incessant interruption of the internet network services. The author buttressing this point maintained that many a time, when there is need for the use of new technologies such as internet for browsing and other things the network may either be slow or not available.

Another challenge is that many teachers and lecturers are not ICT compliant, therefore, cannot use ICT in the preparation of lessons and during lessons. Nagel (2013) collaborates this view by saying that the key among all the challenges in the use of new technologies in teaching and learning business education programmes is lack of suitable professional development for business educators who are required to integrate the new technologies into classroom practices. Okoli & Wagbara (2016) upheld that there is dearth of trained teachers for e-learning. This is the reason why Bongotus & Onyenwe (2010) opine that there are business teacher educators available, they lack pre-requisite ICT competency and this hinders the ability to effectively direct teaching and learning. Funding is another challenge for virtual teaching and learning in the post covid-19 era. Iyiola (2013) advanced that inadequate funding of business education programmes leads to lack of ICT infrastructure. The author states that where there is inadequate ICT infrastructure for the teaching of students, they do more of theory than practical which may not enable them to be highly competitive in the labour market. Plitnichenko (2020) confirmed that challenges of virtual learning in post covid-19 era include: organization of work processes and time management: The teachers are supposed to move their classes online having no additional training and extra budget. The author stressed that many schools are not prepared for moving classes online. In this situation, the burden is put on teachers to adapt themselves and their student s to a new way of learning. Gadgets shortage and crashing systems is another challenge since not every student and teacher has a personal gadget to use for online learning. Another problem everyone face is a computer crash that usually happens at the most unexpected moment.

Plitnichenko maintained that millions of people around the world are experiencing technical difficulties because of the high usage rate of online learning systems. Internet connection is either unstable or the current data plan is not enough to cover the progressive

e-learning needs. Teachers are trying to manage the bad internet connection during the online lessons. The solution to connectivity is calling your provider and seeking advice as well as upgrading your current Internet plan. Computer literacy is another challenge to online teaching and learning. It is hard for teachers and students to start using a learning management system or any other digital tool out of nowhere without additional training. An additional class of computer literacy for both teachers and students can be a solution. Security: virtual teaching and learning in post covid-19 is a fertile ground for cyber criminals, unleashing the wave of cyber-attacks. The user should be careful about the data disclosed on the Internet. It is advisable not to use suspicious websites and applications and to be attentive when opening emails from unknown persons and update your software regularly. Lack of interaction: During the online lectures, it is hard to keep students engaged without a teacher's physical presence and face-to-face contact. For instance, science labs (physics, chemistry, etc.), it is impossible to put into practice without in-person instructions. It is important to ensure constant contact and tracking the progress and giving feedback to students is another step to keeping each student engaged.

Challenges of covid-19 remains even after covid-19 pandemic. Education industry has to face another side of it, which seems difficult to solve due to numerous challenges that must be defeated before its workability. Covid- 19 pandemic brought into play the reality of virtual activities such as virtual meeting, virtual conference and virtual teaching and learning. Virtual teaching and learning is a technological advancement that has been welcomed world-wide even though many institutions have not fully keyed into it due to the challenges involved. It is observed that many educational institutions lack the necessary technological resources needed for virtual teaching and learning. According to Nagel (2013) even though new technologies have been accepted world-wide in almost every aspect of education, some challenges are preventing the effective implementation. Challenges such as lack of professional development among educators who are the implementers of the virtual teaching and learning is very significant. Therefore, the study focused on the challenges of virtual teaching and learning in post covid-19 pandemic era.

Research Questions

The following research questions guided the study:

1. What are the challenges of virtual teaching and learning in post covid-19 era?
2. What are the solutions to the challenges of virtual teaching and learning in post covid-19 era?

Hypotheses

Two null hypotheses were formulated and tested at 0.05 level of significance.

1. There is no significant difference in the mean responses of male and female lecturers of school of business and management technology on the challenges of virtual teaching and learning in post covid-19 era.
2. There is no significant difference in the mean responses of male and female lecturers of school of business and management Technology on the solutions to the challenges of virtual teaching and learning in post covid-19 era.

Methods

Descriptive survey research design was adopted for the study. The area of the study was The Polytechnic Bali, Taraba State. The population of the study comprised 61 lecturers in the five departments of School of Business and Management Technology, The Polytechnic Bali. Sampling was not applied since the population was sizeable to handle. An instrument titled challenges of virtual teaching and learning questionnaire (CVTLQ) was used to collect data for the study. The 19-items questionnaire was structured on a four points rating scale of Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD) weighted as 4, 3, 2, and 1 respectively. The questionnaire was validated by three experts from the School of Business and Management Technology, The Polytechnic, Bali. Cronbach Alpha procedure was used to determine the internal consistency of the instrument and it yielded a reliability coefficient of 0.79. A total number of 61 copies of the questionnaire were administered to lecturers in the school by one of the researchers and a research assistant. Out of the 61 copies of the questionnaire distributed 59 copies which represent 98% of the distributed questionnaire were retrieved and used for the study. Mean and standard deviation were used to analyse the data collected on the research questions, while t-test statistics was used to test the hypotheses at 0.05 level of significance. The decision rule was based on the principle of upper and lower limit of the mean score.

Response Options	Point	Real Limit of Numbers
Strongly Agreed (SA)	4	3.50 - 4.00
Agreed (A)	3	2.50 - 3.49
Disagreed (D)	2	1.50 - 2.49
Strongly Disagreed	1	1.00 - 1.49

The null hypothesis was rejected if the p-value was more than the t-value while the hypothesis was accepted if the p-value was less or equal to the t-value.

Results

Research Question 1:

What are the challenges of virtual teaching and learning in post covid-19 era?

Table 1: Mean ratings of male and female lecturers of School of Business and Management Technology on the challenges of virtual teaching and learning in post covid-19 era

S/N	Challenges of virtual teaching	X_M	X_F	X_G	SD_G	Remarks
1.	Poor internet service	3.26	3.18	3.22	0.89	Agree
2.	Epileptic electric power supply	3.47	3.49	3.48	0.83	Agree
3.	Lack of professional development	3.77	3.41	3.59	0.72	Strongly Agree
4.	Computer literacy	3.57	3.30	3.43	0.84	Agree
5.	Cyber-attacks	3.28	3.34	3.31	0.60	Agree
6.	Connectivity	3.26	3.18	3.22	0.68	Agree
7.	Organization of work processess	3.67	3.82	3.74	0.53	Strongly Agree
8.	Lack of interaction	3.52	3.49	3.50	0.89	Strongly Agree
9.	Cost of running standby generator	3.35	3.33	3.34	0.86	Agree
10.	Inadequate funding	3.78	3.63	3.70	0.61	Strongly Agree
11.	Use of new technologies	3.76	3.40	3.58	0.74	Strongly Agree

Key: X_M = Mean of Male; X_F = Mean of Female; X_G = Grand mean; SD = Standard Deviation; Number of Respondents (59); **SA**= Strongly Agreed; **A** = Agreed;

Table 1 shows that the grand mean ratings of responses of respondents on 6 items out of the 11 identified items range from 3.22 to 3.48 which are within the boundary limit of 2.50 to 3.49 on a 4-point rating scale. This indicates that the respondents agreed that the 6 identified items in the table are the challenges of virtual teaching and learning in post covid-19 era. The grand mean ratings of responses of respondents on the remaining 5 items in the table, that is, 3, 7, 8, 10 and 11 were within the boundary limit of 3.50 to 4.00 respectively on a 4-point rating scale. This implies that the respondents strongly agreed that the remaining five items in the table are challenges of virtual teaching and learning in the post covid-19 era. The standard deviation values for the 11 items were between 0.53 to 0.89 which indicate that the responses of the respondents are close to the mean and one another.

Research Question 2:

What are the solutions to the challenges of virtual teaching and learning in post covid-19 era?

Table 4: Mean ratings of male and female lecturers of School of Business and Management Technology, on the solutions to the challenges of virtual teaching and learning in post covid-19 era.

S/N	Solutions to the challenges	\bar{X}_M	\bar{X}_F	\bar{X}_G	SD	Remarks of virtual teaching
1.	Computer literacy class for both teachers and students	3.13	3.22	3.17	0.81	Agree
2.	Provision of funds for the purchasing of ICT machines and equipment and for maintenance	3.45	3.45	3.45	0.72	Agree
3.	Providing stable and reliable electricity	3.26	3.17	3.21	0.67	Agree
4.	Seeking advice from internet providers and upgrading to current internet plan	3.63	3.52	3.58	0.65	Strongly Agree
5.	Lecturers should update their ICT knowledge	3.27	3.33	3.30	0.60	Agree
6.	Users should be careful about data disclosed on internet and avoid suspicious websites and plans	3.80	3.49	3.64	0.52	Strongly Agree
7.	Constant contact and tracking of student progress and feedback	3.34	3.38	3.36	0.71	Agree
8.	Mobile Guardian, a Google building partner to offer the right edtech tools to teachers to assist them connect	3.77	3.41	3.59	0.72	Strongly Agree

Key: \bar{X}_M = Mean of Male; \bar{X}_F = Mean of Female; \bar{X}_G = Grand mean; **SD** = Standard Deviation; Number of the Respondents (59); **SA** = Strongly Agreed; **A** = Agreed.

Table 2 shows that the grand mean ratings of responses of respondents on 5 items out of the 8 identified items, range from 3.17 to 3.45 which are within the boundary limit of 2.50 to 3.49 on a 4-point rating scale. This indicates that the respondents agreed that the 5 identified items in the table are the solutions to the challenges of virtual teaching and learning in post covid-19 era. The grand mean ratings of responses of respondents on the remaining 3 items in the table, that is, 4, 6 and 8, were within the boundary limit of 3.50 to 4.00 respectively on a 4-point rating scale. This implies that the respondents strongly agreed that the remaining 3 items in the table are solutions to the challenges of virtual teaching and learning in the post covid-19 era. The standard deviation values for the 8 items are between 0.52 to 0.81 which indicate that the responses of the respondents are close to the mean and one another.

Hypothesis 1:

There is no significant difference in the mean responses of male and female lecturers of school of business and management technology on the challenges of virtual teaching and learning in post covid-19 era.

Table 3: Summary of Two Tailed t-test analysis of male and female lecturers of school of business and management technology on the challenges of virtual teaching and learning in post covid-19 era

Group	N	X	SD	α	Df	t-val	p-val	Decision
Male	41	3.43	1.14	0.05	57	0.60	0.54	NS
Female	18	3.36	0.82					

The hypothesis test in Table 3 revealed that the mean ratings of male and female lecturers of school of business and management technology on the challenges of virtual teaching and learning in post covid-19 era is 3.43 and 3.36 respectively while the corresponding standard deviation is 1.14 and 0.82. T-value is 0.60 at degree of freedom of 57 while the p-value is 0.54. Testing at alpha value 0.05, the p-value is not significant, since the p-value is greater than the alpha value of (0.05). Therefore, the null hypothesis is not rejected; hence, the mean responses of male lecturers in the school of business and management technology do not significantly differ from that of the female lecturers on the challenges of virtual teaching and learning in post covid-19 era.

Hypothesis 2:

There is no significant difference in the mean responses of male and female lecturers of school of business and management technology on the solutions to the challenges of virtual teaching and learning in post covid-19 era.

Table 4: Summary of Two Tailed t-test analysis of male and female lecturers of school of business and management technology on the solutions to the challenges of virtual teaching and learning in post covid-19 era.

Group	N	X	SD	α	Df	t-val	p-val	Decision
Male	41	3.45	0.66	0.05	57	0.50	0.25	NS
Female	18	3.28	0.70					

Data in Table 4 indicate that the aggregate mean ratings of lecturers in of school of business and management technology on the solutions to the challenges of virtual teaching and learning in post covid-19 era is 3.45 and 3.28 respectively, while the corresponding standard deviation is 0.66 and 0.70. Test of hypothesis in Table 6 indicated that t-value is 0.50 at degree of freedom of 57, while the p-value is 0.25. Testing at alpha level of 0.05, the p-value is not significant since the p-value is greater than the alpha value of (0.05). Therefore, the null hypothesis is not rejected; hence, the mean responses of male lecturers of school of business and management technology do not significantly differ from that of the female lecturers of the school on the solutions to the challenges of virtual teaching and learning in post covid-19 era.

Discussion of Findings

The findings of the study according to research question one showed that respondents agreed on the eleven items as the challenges of virtual teaching and learning in post covid-19 era. Some of the identified challenges include; Poor internet service, epileptic electric power, supply, lack of professional development, computer literacy, cyber-attacks, connectivity, organization of work processes, lack of interaction, cost of running, standby generator, Inadequate funding and use of new technologies. The result of the study implies that there are lot of challenges to virtual teaching and learning in the post covid-19 era. The findings are in line with the findings of Onojetah & Utoware (2019) who found that the challenges of new technology application has led to learners not being adequately exposed to those experiences that will guarantee the total development of their being in the e-world. Nagel (2013) and Okoli & Wagbara (2016) collaborate these views by saying that the key among all the challenges in the use of new technologies in teaching and learning business education programmes is lack of suitable professional development for business educators who are required to integrate the new technologies into classroom practices and that there is dearth of trained teachers for e-learning. Bongotus & Onyenwe (2010) affirmed the findings by saying that there are business teacher educators available, they lack pre-requisite ICT competency and this hinders the ability to effectively direct teaching and learning.

The study identified solutions to the challenges of virtual teaching and learning in post covid-19 era to include; computer literacy class for both teachers and students,

provision of funds for the purchasing of ICT machines and equipment and for maintenance, providing stable and reliable electricity, seeking advice from internet providers and upgrading to current internet plan, lecturers should update their ICT knowledge, users should be careful about data disclosed on internet and avoid suspicious websites and plans, constant contact and tracking of student progress and feedback, Mobile Guardian, a Google Build partner to offer the right edtech tools to teachers to assist them connect. The findings supported that of Plitnichenko (2020) who reported that teachers should be careful about the data disclosed on the Internet, there are many ways to engage students during the online lessons: PowerPoint presentations, short videos, quizzes, on-the-go recordings, referring to science labs, students may use scientific modelling and simulation applications to gain practical experience, keep the lessons simple, be kind grading assignments, find time to discuss students concerns about the current world situation during the lesson and ask each student how you can help. In addition, Ugonu (2019) states that reliable electricity must be available for e-learning.

Conclusion

Based on the findings of the study, it was concluded that there exists challenges of virtual teaching and learning in the post covid-19 era. This is evident as many institutions have not planned to join the virtual teaching and learning due to their inability to overcome the challenges. Some of the challenges like poor power supply and inadequate funding is very difficult to conquer because of the economic recession available in the nation which has affected the educational system. The study therefore, concluded that challenges of virtual teaching and learning in the post covid-19 era can be tackled by following the eight identified solutions to the challenges. The result of the hypotheses tested showed no significant differences in the mean ratings of lecturers of school business and management technology on 14 out of the 19 items, whereas, there are significant differences in the ratings of the lecturers on the remaining 5 items of the study.

Recommendations

Based on the findings and the conclusions of the study it was recommended that:

1. Institutions management should provide functional standby generating plant to enhance and ensure stable electric power supply to avoid interruption of lectures when using virtual teaching and learning method.
2. Institutions should organize computer literacy programme for both lecturers and students to train and retrain lecturers on the use of new technologies for virtual teaching and learning for effective instructional delivery.
3. One of the criteria for employment of lecturers in this global world should be based on the knowledge of new technologies and ICT competencies.
4. Education institutions should be adequately funded in order to acquire and maintain the new technologies for programme sustainability.



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SCHOOL SUPERVISION AND INSPECTION: STRATEGIES FOR QUALITY ASSURANCE IN BUSINESS EDUCATION IN POST COVID-19 ERA

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Abstract

Access to quality education is a fundamental human right of all citizens. The Corona virus 2019 (COVID-19) has devastating effects on the global educational sector. The world is gradually getting out of the pandemic. This paper addresses the concepts of school supervision, school inspection, quality assurance and business education. Furthermore, the paper established that school supervision and inspection are strategies for quality assurance in business education in post COVID-19 era. This is because they could lead to provision of quality inputs for teaching and learning of business education, effective and efficient curriculum implementation, staff training and development and accountability through proper keeping of school records. The paper concluded that effective implementation of school supervision and inspection would lead to human capital development for repositioning the Nigerian economy in the post COVID19 era. On a final note, the paper among others recommended that school supervision and inspection should be well utilised for quality assurance in business education in the post COVID-19 era.

Key words: school supervision, school inspection, business education, quality assurance, COVID-19.

Introduction

Access to quality education is a fundamental human right of all citizens. This implies that assuring quality in business education, which Umoru (2013) sees as a discipline with course offerings that are structured to inculcate into the students, the spirit of resourcefulness, endurance and innovativeness is a right to those who choose to study it. Education is an instrument for human resource development, in the sense that it equips people with knowledge, skills as well as competencies and instils in them moral values



that would make them to become functional members of the society. This shows that education is an instrument for change and development.

This very important sector of the society is however seriously affected by the Corona virus 2019 (COVID-19) which is a deadly virus that has devastating effects on all facets of human life including economic, social, political, and education. It led to a total lockdown of the entire human society, leading to closure of schools. In line with this, a study conducted by Ogunmode in 2020 revealed that closure of schools which was occasioned by COVID-19 has impact on research programmes in tertiary institutions in Federal Capital Territory (FCT), Abuja, Nigeria. Similarly, COVID-19 led to introduction of virtual classroom and other forms of technological application to the teaching-learning process for those that can afford them, especially in the private sector. In the same vein, COVID-19 made some State governments to adopt television and radio for the purpose of teaching and keeping students busy during the lockdown. Furthermore, COVID-19 was responsible for shortening or outright cancellation of school terms in States across Nigeria and made most government-owned tertiary institutions of learning to have interrupted academic calendars which they are struggling to complete and start new ones.

The society is gradually getting out of the pandemic that was occasioned by the virus. To attain the goals of education in the post COVID-19 era, there is need for quality control in form of quality assurance in education which could be attained using school supervision and inspection. School supervision has to do with the designation of school officials for the purpose of providing leadership to teachers and educational workers in order to improve the quality of instruction (Walu, 2010). This shows that supervision is not done by everybody in an educational system, but only restricted to school supervisors. School inspection on the hand, seeks to enhance standard in teaching and learning through examining how they are done. It should be noted that the rationale behind school supervision and inspection is not to punish or witch-hunt anybody, but, their aims as the Federal Government of Nigeria (2013) states in the National Policy on Education, are to enhance quality control, uniformity of policies and curriculum implementation at all levels of the Nigerian education.

From the foregoing, it could be seen that school supervision and inspection could lead to quality assurance in business education. This is because they could ensure that the right things are done in business education programme leading to the attainment of its goals and objectives. Furthermore, they have the tendency of proving and improving the quality of the programme in order to meet the needs of the students and the society. This is because, they could make the teachers to be more committed, competent, efficient and effective in service delivery. They could also make the parents/guardians to get value for their money and serve as stimulants to the learners to be dedicated to their studies. It is therefore, based on the aforementioned that this paper focuses on school supervision and inspection as strategies for quality assurance in business education in post COVID-19 era.

Conceptual Clarifications

The following concepts were reviewed and clarified in order to attain the objective of this paper, which is to bring to the fore, the ways through which school supervision and inspection could enhance quality assurance in business education in the post COVID19-era.

School Supervision

The major concern of school supervision is the enhancement of quality of teaching and learning in schools. It focuses on monitoring of activities of both teaching and non-teaching staff in the school system in order to minimise their weaknesses and take advantage of the strengths so as to improve the quality of instruction in the schools. In line with this, Ogunu in Igbinedion (2014) points out that educational supervision is the process of overseeing the activities of teachers and other workers in the school system in order to ensure that they abide by the policies and guidelines set by the regulating body. To Eziuzo (2014), supervision deals with the process of providing leadership that is designed to help staff to be more competent and overcome some challenges they might be facing, leading to improvement in job performance. Similarly, Tarda (2016) reports that supervision in education deals with the efforts of educational officials in providing leadership to teachers and other workers in the educational enterprise for the purpose of improving quality of instruction. These imply that in education, school supervision is one of the indispensable tools for the effective operation of a good school system. This is because it is concerned with supporting and assisting teachers to improve instruction as well as ensuring that the non-teaching staff discharge their duties diligently through dedication to work and also serves as a quality control system for the educational enterprise at all levels of education. This is because adequate supervision of teachers and teaching activities in the schools is a means which could improve teaching and learning to serve the purpose of the learners and the society at large.

As put forward by Igbinedion (2014), school supervision could be done using techniques including but not limited to classroom visitation, conferences, micro-teaching, educational workshops and inter-school visitation. As for the functions/purposes of school supervision, Igbinedion (2014) and Tarda (2016) point out they include; improvement of teaching and learning, helping teachers to discover their special creative abilities, helping to identify areas of needs in schools and making provisions for the needs, creating opportunity for exchange of knowledge between the supervisor and teachers or among teachers in different schools, improving teaching and learning, making sure that teachers are present at their duty posts, motivating teachers to work hard, making students to conduct themselves politely, making sure that school records are properly kept, enhancing proper implementation of curriculum, assessing teachers' effectiveness in the classroom and determination of teachers that should be rewarded with promotions, commendations and those that are to be reprimanded, demoted or disengaged.

School Inspection

School inspection deals with official investigation and examination of a school activities in order to ensure that they conform with the set standard. It also monitors and evaluates academic activities in schools. These show that it focuses on maintenance of standard in teaching and learning in the school system. Based on these, a deduction from Igbinedion (2014) points out that school inspection is an established process of sending staff to examine different activities going on in a school, so as to make sure that there is conformity to rules and regulations in relation to policy and curriculum implementation and giving feedback to the regulatory body which could be Ministry of Education or any of her agencies such as the National Commission for Colleges of Education (NCCE), National Board for Technical Education (NBTE) and National Universities Commission (NUC). In the same vein, Sobah, Anyanwu and Yahaya (2014) see school inspection as a series of activities in which the inspectorate unit of ministries of education guide, assist and advice schools on how best to improve quality of instruction through assessment of human and material resources to ensure that standard is maintained and corrections made where necessary. They further state that inspection is done for the purpose of getting government approval, operational improvement, programme recognition, and situational demand. School inspection is of different types. According to Igbinedion (2014) and Sobah, Anyanwu and Yahaya (2014), the following constitute some of the types of school inspection:

Full Inspection: This involves an inspection of the entire activities of a school and it is usually followed by a comprehensive report.

Routine inspection: This is done at regular intervals in order to determine the level of compliance of a school to the established standard.

Check-up inspection: This is an impromptu visit of an inspector to a school in order to ensure that right things are always done

Development inspection: This is done for the purpose of up-grading a school through ascertaining what is on ground in order to make provision for what is required for the up-grade.

Emergency inspection: This is done when there is an emergency in a school or a petition is written against a member of a school (an administrator(s) or staff).

Follow-up visit: This is done after a report has been furnished to the Ministry of Education by inspectors in order to ensure that all recommendations of the inspectors are adhered to.

Quality Assurance

Quality is an accepted standard. It is therefore, the yardstick used in determining whether something is high or low in standard. In education, quality assurance looks at the extent to which educational standards are sustained (Nanbam, 2010). This implies that sustainability of standard describes an assurance of attainment of quality. In the same vein, Igbinedion (2014) states that quality assurance is a way of guaranteeing standard. Through this, everything that is required has to be done to ensure that a product meets the requirement of the buyers. The author further states that in education, quality assurance gives a guarantee that an output of the educational system can relatively exhibit all the

skills expected of the level of education they successfully passed through. Furthermore, a deduction from Oludare and Suberu (2020) shows that quality assurance in education is crafted for the purpose of proving and improving the quality of methods, educational process and products of an educational system by taking measures that would ensure that it is better able to satisfy the educational needs of the society. Similarly, Aluko and Bolanta (2020) report that quality assurance is seen as a series of activities set up deliberately to make sure that an entity fulfils the requirement of quality that is needed by using standard process like funding, training and quality control. Quality assurance therefore entails getting the right inputs (competent manpower, qualified students and material resources such as classrooms and textbooks) which if well blended, would give the desired result. However, for this to be achieved there is the need for continuous evaluation in order to ascertain whether or not there is the need for additional resources for the purpose of maintaining or improving standards. This explains why some schools have internal quality assurance units responsible for ensuring that the right thing is done before the coming of external assessors which could be announced or impromptu.

Business Education

Business education is the most preferred educational course in Nigerian colleges of education and universities and it is designed to meet both the general and vocational educational needs of the society (Ademiluyi & Oyedele, 2020). This could result from the benefits the parents/guardian and students perceived from the discipline in relation to its job prospects and the self-reliant skills which it equips the learners with. As put forward by Adejare (2020), business education is fashioned in such a way that it equips students with knowledge and skills that are required in the world of work by developing in them, marketable skills, knowledge and attitudes that are required for employment and advancement in business and related occupations. In the same vein, Ugwoke in Utoware and Kren-Ikidi (2014) sees business education as a skill-based, work-focused, result-oriented and technology-based discipline as well as an element of vocational and technical education that prepares the recipients for career in business and developing them to become intelligent consumers of goods and services through equipping them with required competencies, skills, knowledge, understanding and attitudes that would lead to efficient and effective performance as employees in industries and civil service as well as business proprietors. A look at the aforementioned shows that business education curriculum has the potential of enabling its products to properly package and promote themselves for jobs in both the public and private sectors of the economy. It could also make them to forget about white-collar jobs and choose to be self-reliant and create jobs for other people. Furthermore, the discipline is capable of making its products to be rational in utilising their available resources and also become functional members of the society.

School Supervision and Inspection and Quality Assurance in Business Education in Post COVID-19 Era

School supervision and inspection are effective strategies for enhancing quality in education. Quality assurance is highly desirable in business education but, it is more

required in the post COVID-19 era due to problems and obstructions that COVID19 caused in the educational sector. The following are some of the ways through which school supervision and inspection could lead to quality assurance in business education:

School supervision and inspection could lead to provision of quality inputs for teaching and learning of business education. These inputs are teaching and non-teaching staff, students, instructional materials, textbooks, classrooms and laboratories. This is because; the monitoring and examination exercises of the supervisors and inspectors would give rise to reports that would ensure that the inputs that are provided are in the right number and quality. It would also see to the fact that only qualified candidates are admitted to study the programme. All these would lead to quality assurance through making sure that round pegs are inserted in round holes as far as business education programme is concerned, put back the missing links created by COVID-19 and continue to attain its objectives in post COVID-19 era for the betterment of the society.

School supervision and inspection would lead to effectiveness and efficiency in curriculum implementation. This implies that supervision and inspection would lead to quality assurance by making business education teachers to be more hardworking, dedicated and committed to their duties in the post COVID-19 era. This is because supervision and inspection would make the teachers to have it at the back of their minds that failure to be at their duty posts and be dedicated to curriculum implementation through effective teaching could make them to be reprimanded, demoted or even lose their jobs. Furthermore, the fact that the reports of supervisors and inspectors could be used for teacher promotion could also make teachers to strive toward efficiency and effectiveness in curriculum implementation which are needed for societal progress in the post COVID-19 era.

Reports of school supervision and inspection could be used for staff training and development in post COVID19 era. This is because, both school supervision and inspection could be used in determining the strengths and weaknesses of the teachers and as such determine those that need training and development. This would therefore lead to quality assurance in business education because the trained teachers would be exposed to new skills and techniques that would lead to attainment of goals and objectives of business education. Furthermore, the nominated teachers would be motivated to work hard and it would serve as a stimulant to others to be dedicated to their duties. This because in most cases, only dedicated teachers are nominated for training and development.

School supervision and inspection could lead to accountability that would lead to quality assurance in business education in the post COVID-19 era. This is due to the fact that both supervision and inspection ensure that school records are properly maintained. Through this, information in relation to school finance, school enrolment, staff strength and the challenges business education is facing would be made available. This would eliminate corrupt practices and enhance effective utilisation of funds that are voted for teaching and learning of business education. It would also make government to make provision for facilities that would take care of the students and know whether there is need to deploy more staff to a given school, so as to make the desired quality to be attained in business education programme.

Conclusion

The Corona virus 2019 pandemic dealt severely with the educational sector leading to closure of schools and disrupted academic calendar. It also led to adoption of new teaching techniques that would suit the social/physical distancing requirement for staying safe from being infected by the virus. The impact of the pandemic has made quality assurance to be needed in business education programme more than ever before. This paper established that school supervision and inspection are potent strategies for quality assurance in business education in post COVID-19 era. The implication of this is that strict application of these quality control mechanisms (school supervision and inspection) in post COVID-19 era, would lead to human capital development in business education, focusing on skill areas such as accounting, marketing, business management, office technology management, communication, business law, risk management and entrepreneurship. The use of school supervision and inspection as quality control mechanisms is therefore expected to lead to production of skilful people that would help in repositioning the Nigerian economy in the post COVID-19 era and put it on the path of recovery.

Recommendations

Based on the foregoing and the conclusion which was drawn, the following recommendations are suggested:

1. School supervision and inspection should be well utilized for quality assurance in business education programme.
2. All teachers should be equally supervised and inspected without fair or favour.
3. The school supervisors and inspectors should be polite and avoid dictatorial tendency when dealing with teachers.
4. The supervisors and inspectors should ensure that schools abide by COVID-19 guidelines.
5. Credit should be given to those that deserve it and only the hardworking and dedicated staff should be nominated for staff training and development.

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UNIVERSITY LECTURERS' PERCEPTION OF THE ESSENTIAL SKILLS AND TASKS FOR SUCCESSFUL ONLINE TEACHING IN THE POST-COVID-19 ERA

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Abstract

The Covid-19 pandemic has altered the future of teaching and learning whether it is accepted or not. It has changed the nature of face-to-face teaching and enabled the rapid growth of blended and online teaching and learning. This study examined university lecturers' perception of the essential skills and tasks for successful online teaching in the post-covid-19 era. Two research questions were raised and one hypothesis was tested in the study. The study used a descriptive survey design. The population of the study comprised all the lecturers in universities in North-west, Nigeria. A sample of 214 lecturers was selected. A structured questionnaire tagged Skills and Tasks for Online Teaching Questionnaire (STOTQ) designed by the researcher and duly validated with a Cronbach reliability coefficient of 0.85 was used to gather data for the study. Two hundred and fourteen copies of the questionnaire were administered and were retrieved and used for the study. The data collected to answer the research question were analysed using mean and standard deviation. One-way Multivariate Analysis of Variance (MANOVA) was used to test the hypothesis at the 0.05 level of significance. The study found that interaction, management, technology content, organization/instruction design, and pedagogical skills are highly needed for successful online teaching in the post-covid-19 era, there was no significant difference between the responses of male and female lecturers on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era $F(1, 212) = 1.53, P > 0.05$; Wilk's $\Lambda = 0.886, \eta^2 = 0.04$. Based on the findings, it was concluded that interaction, management, technology, content, organisation/instructional design, and pedagogical skills and the tasks identified are essential for successful online teaching in the post-covid-19 era. Based on the findings of the study, the following is recommended; lecturers should use these identified skills to self-evaluate their ability to teach in an online environment and identify their training needs; as the work of academics moves from face-to-face mode to blended and online modes, especially because of covid-19, lecturers should critically question their practices and discuss with their peers for the adoption of new pedagogical practices for the new teaching spaces.

Keywords: Skill, tasks, online, teaching, post-covid-19, era

Introduction

Information Communication Technologies (ICTs) have indeed been infused in all areas of education especially teaching and learning. This infusion has provided a soft landing for education in the face of the Covid-19 pandemic. The ubiquitous nature of information communication technologies has helped and will continue to help higher education during this period of coronavirus. Classroom boundaries have exceeded the realms of location, physical presence and time (Barber, Donnelly, Rizvi, & Summers, 2013). The Covid-19 pandemic has altered the future of teaching and learning whether it is accepted or not. It has changed the nature of face-to-face teaching and enabled the rapid growth of blended and online teaching and learning. ICTs offer opportunities for education to continue even in the Covid-19 period, as a result, stakeholders' attention has been shifted to online courses. This comes with challenges for both teachers and students. With the growth of online teaching and learning, teachers must have an understanding of the roles and practices expected of them of an effective online teacher. According to Albrahim (2020), the ICT era coupled with Covid-19 is the era of anytime and anywhere learning. New teaching pedagogies, learning skills, and assessment methods have emerged to adapt to these changes (Barber et al., 2013). In addition, new formats of learning are expected.

These changes represent challenges that may burden lecturers in higher education who have to keep pace with the innovative paradigms of higher education and new approaches to teaching and learning (Siemens & Matheos, 2010). This includes being aware of who the students are, what they need to learn, how to teach them, as well as the skills that they, as instructors, need to master to effectively execute their role (Palloff & Pratt, 2013). For lecturers to be able to cope with all these changes, there is a dire need to examine the skills of successful online teachers.

A skill is an ability learned to act with determined results with good performance often within a given timeframe, energy, or both. A skill generally requires certain environmental stimuli and situations to assess the level of proficiency demonstrated and used. Teachers require a broad range of skills to make a significant contribution to student learning in an online environment. These essential skills include:

Pedagogical Skills: Effective online instructors should understand the fundamentals of online teaching and pedagogy. They must demonstrate this understanding by applying a large number of principles and strategies. These principles and strategies include Learning theories, such as learning styles, the adult learning theory, the learner-centred approach, and collaborative learning; Designing and implementing appropriate instructional strategies, as well as classroom assessment and student engagement techniques; Organizing and facilitating students' participation and providing guidance and support as needed; Using criterion-based assessment to evaluate individual and group performance; Motivating students and showing enthusiasm and interest; Encouraging knowledge construction based upon learners' prior knowledge and life experience; Fostering learners' self-assessment and reflection; and Promoting group interaction, collaboration, and teamwork. (Abdous, 2011; Bailie, 2011; Craddock & Gunzelman, 2013; Munoz Carril et al., 2013). Pedagogical skills are about the teachers' competencies to determine what, where, when, how and the method that will best be adopted to enhance

effective teaching that will result in better results. According to Jeral and Elizabeth (2015), online pedagogical skills include well developed and careful design of learning activities that promote interaction and prompt feedback in an online environment. This means the crafting of a meaningful learning experience in an online environment online. Successful online educators always establish and project their pedagogical presence into the online learning environment. Required roles of online educators include pedagogical knowledge, facilitating active learning, designing instruction, coordinating social interaction, managing the course, and troubleshooting technical issues. Jeral and Elizabeth (2015) noted that familiarity with instructional design is particularly important in online education, which encompasses the planning, organizing, and structuring of elements within the online learning environment.

The next skill is the content skill. Content skill generally refers to the facts, concepts, theories, and principles that are taught and learned in specific academic courses, rather than two related skills such as reading, writing, or researching that students also learn in school. Online instructors should be able to do the following to demonstrate their content skill: expressing and mastering extensive knowledge of the content; Stating learning goals and objectives that coincide with learners' levels and characteristics; drafting and developing learning and assessment activities that align with learning goals and objectives; developing a course outline that includes all course components and elements; designing a teaching proposal at the general level and identify each of its phases or elements; developing and selecting appropriate and varied learning resources that accommodate different learning styles and preferences; Linking the subject and content with scientific, social, cultural, and any other relevant phenomena; and Developing an inventory of existing content and resources and any additional content and resources that will be needed. (Abdous, 2011; Bailie, 2011; Munoz Carril et al., 2013)

Design Skill: Instructional design is the creation of learning experiences and materials in a manner that results in the acquisition and application of knowledge and skills. Designing and developing online courses is a demanding task. It requires having a design and production team, which consists of an instructional designer, instructional technologist, graphic and media designers and production team, and librarians (Abdous, 2011). These individuals work collaboratively to produce high-quality online courses (Haughton, Sandt, & Slantcheva-Durst, 2014). However, online instructors must be able to do the following: Understanding and applying instructional design principles, models, and theories; Organizing and presenting the learning materials in different formats; Cooperating with the production team to design learning activities and select appropriate tools and techniques to present these activities; and Using students' previous feedback to develop and design new courses and assess the course design quality by using quality assurance tools and instruments, such as the Quality Matters Rubric. (Abdous, 2011; Munoz Carril et al., 2013; Newby, Eagleson, & Pfander, 2014)

Technological Skill: Although online learning relies heavily on technology, there is no imperative need for online instructors being technologically advanced. Technological skills are the abilities and knowledge needed to perform specific tasks both by students and instructors in an online environment. They are practical ideas that relate to the use of

different types of mechanical, electronic, information technology, communication devices, or other related ideas in a connected environment. Technology skill has to do with abilities, experiences and technical know-how to be able to operate many devices, perform and navigate through many information technology platforms in an online environment. Online instructors have to possess adequate technological literacy skills to be able to do the following: Accessing various technological resources and tools, such as email, Internet browsers, LMSs, text and video chat applications, and productivity software and applications; Understanding the learning and teaching capabilities and limitations of these tools; Being aware of the technical potential of, and procedures used to create, e-content, such as e-books and instructional videos; and Being alert to the latest updates and renovations of educational technology and software. (Abdous, 2011; Alman & Tomer, 2012; Bailie, 2011; Munoz-Carril et al., 2013)

Management Skill: As classroom management is an important aspect of face-to-face education, managing courses and learning is essential in online learning environments. An awareness of institutional policies and norms is also an important aspect of being a successful online instructor. Skills and tasks related to these two aspects include the following: Being able to clarify the roles and expectations of the instructor and the learners; Managing the course time and applying time-saving techniques; Demonstrating leadership, management, mentoring, and coaching skills, as well as knowledge of administrative qualities and procedures; Tracking course and students' progress regularly; Establishing and declaring rules and regulations for participation, submission of assignments, timeliness, sending and seeking feedback, and communication protocols; Conducting research on classroom teaching then interpreting and integrating research findings and results; Understanding and demonstrating a commitment to institutional policies; Maintaining contact and networking with online teaching and administrative teams; and Complying with legal, ethical, and copyright issues and standards. (Bailie, 2011; Craddock & Gunzelman, 2013; Munoz Carril et al., 2013).

Interaction Skill: Active communication and social presence are vital to engaging online learners. Using different communication tools (e.g., email, video chat, text messages, etc.), online instructors have to efficiently communicate and promote interactivity among the learners. Some activities to achieve this include the following: Facilitating and maintaining interactive discussion and information exchange; Using sufficient and commonly understandable language; Respecting and considering cultural differences; Clearly requesting information and asking questions; Clarifying the purpose and meaning of messages and feedback; Emphasizing the important points using font colours and effects; Ensuring the quality and accuracy of written messages and feedback and detecting typographical and grammatical errors; Personalizing messages and feedback and making them more lively by adding the appropriate sense of humour when possible; Using different communication methods to ensure accessibility among the instructor and learners, and the learners with their peers; Maintaining a warm, friendly, and inviting collegial atmosphere; Creating and developing respectful relationships and a sense of community among the learners; Showing sensitivity and empathy when communicating online; Resolving conflicts and misunderstandings amicably; and Offering advice and

suggestions and clarifying doubts and suspicions. (Abdous, 2011; Bailie, 2011; Fuller & Yu, 2014; Munoz Carril et al., 2013). All these skills and tasks can help in designing and creating professional development opportunities for online lecturers. Online instructors can also use these to self-evaluate their competencies and then recognize their learning and training needs (Baran et al., 2013).

The necessity of the acquisition of these online skills is borne out of the fact that online teaching and learning is now the future of higher education. This has initiated a dramatic change in the educational paradigm. To a large extent now, this change is necessitated by covid-19. Covid-19 has made online education now become a dominant part of the landscape of higher education and has changed the way to educate post-secondary students now and in the future. The online instructor in higher education also requires changes in skills and focus, including adopting a learner-centred approach (Fish & Wickersham, 2009). The rapid growth of online programs raises many new pedagogical, psychological and social issues. Online learning creates a learning environment that compared to traditional classroom-based education, is less personal, more independent, often fragmented, rarely systemic, distributed in space and time, and dependent on the learner rather than on the teacher. To increase online educational effectiveness and to understand how students learn and how teachers teach best in an online environment necessitates a comprehensive theory based on sound, continuous pedagogic research. Classic pedagogy has served numerous generations of brick-and-mortar education teachers and students well, however, it cannot satisfy online teachers and learners, as rapid changes in knowledge and technology are driving the need for new approaches to dissemination and integration of new information into workplaces and work practices, and new learning paths for adults (Haythornthwaite & Andrews, 2011). Teach online. CA (2012) explained that changes in society, student expectations, the population explosion and technology in an online environment are motivating educational institutions and instructors to rethink teaching skills and methods.

The present study is different from previous surveys in several aspects. First, unlike most of the previous surveys, it separates skills from the tasks to demonstrate each skill. Second, it ranked the skills based on the responses of the lecturers and third, this survey uses unique statistical tool to test the hypothesis. The big question now is that what are the essential skills needed for successful online teaching? The researcher's observation shows that the quality of skills lecturers possess for online teaching is questionable. Even though many educators see the importance of online education much more important because of Covid-19 many still lack the experience or knowledge to teach online effectively. Do educators need any special skills or knowledge to successfully teach online? If so, what are they and what are the tasks to demonstrate these skills? These are the questions which this study addressed.

Research Questions

1. What is the perception of lecturers of the essential skills needed for successful online teaching in the post-Covid-19 era?

2. What is the perception of lecturers of the tasks needed to demonstrate the essential skills for successful online teaching in the post-Covid-19 era?

Hypothesis

H₀₁: There is no significant difference between the mean rating of male and female respondents on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era.

Methodology

The descriptive survey design was adopted for the study. The study was a survey of the perceptions of lecturers regarding the essential skills and tasks needed for successful online teaching in the post-Covid-19 era. **The population of the study comprised all the lecturers in universities in North-west, Nigeria.** A sample population of 214 lecturers from universities in North west, Nigeria was selected for the study. These lecturers were selected because of their experience in teaching online courses. This was determined from a preliminary study conducted. The researcher believed that these lecturers are in a better position to assess the essential skills and tasks for successful online teaching. A structured questionnaire tagged Skills and Tasks for Online Teaching Questionnaire (STOTQ) designed by the researcher and duly validated by three experts with a Cronbach reliability coefficient of 0.85 was used to gather data for the study. The PSOTQ consists of six skills and 30 tasks adapted from Lee and Hiruni (2005) and Albrahim (2020) after an extensive review of the literature. The items were placed on a four-point rating scale of Highly Needed (HN) = 4, Moderately Needed (MN) = 3, Fairly Needed (FN) = 2, and Not Needed (NN) = 1. A total of 214 copies of PSOTQ was administered with the help of three research assistance and all were retrieved. The data collected to answer the research question were analysed using mean, standard deviation. The hypotheses were tested using independent one-way multivariate analysis (MANOVA) statistic at 0.05 level of significance. The following boundary limits were used for item options of research instruments. Highly Needed (3.50-4.00), Moderately Needed (2.50-3.49), Fairly Needed (1.50-2.49), and Not Needed (0.0-1.49). The hypothesis was rejected when the observed p-value was less than the fixed p-value of 0.05. The hypothesis was not rejected when the observed p-value is equal to or greater than the fixed p-value of 0.05.

Results

Research Question One: What is the perception of lecturers of the essential skills needed for successful online teaching in the post-Covid-19 era?

Table 1: Mean and standard deviation of responses on online essential skills needed for successful online teaching in the post-Covid-19 era

S/ N	Indicate the level to which the following skills are needed for successful online teaching	Mean	Std	Remark	Ranks
1	Interaction skill	3.77	0.59	Highly Needed	1 st
2	Management skill	3.77	2.54	Highly Needed	1 st
3	Organization/ instructional design	3.66	0.64	Highly Needed	5 th
4	Technology skill	3.69	0.64	Highly Needed	3 rd
5	Content knowledge	3.67	0.71	Highly Needed	4 th
6	Pedagogical skill	3.42	0.76	Moderately Needed	6 th
Weighted Mean and Std		3.66	0.98	Highly Needed	

Table 1 reveals that the following five of the six listed skills are highly needed for online teaching in the post Covid-19 era, interaction (mean = 3.77), management skills (mean = 3.73), organization/instructional design skills (mean = 3.66), Technology skills (mean = 3.69), content knowledge (mean = 3.67). The respondents indicated that pedagogical skill is moderately needed (mean = 3.42). The skills are ranked thus: interaction skill 1st, management skill 1st, technology skill 3rd, content knowledge 4th, organization/instructional design 5th and pedagogical skill 6th. All the standard deviations are low which shows the responses of the respondents are clustered around the mean. The weighted mean and standard deviation are 3.66 and 0.98, respectively.

Research Question Two: What is the perception of lecturers of the tasks needed to demonstrate the essential skills for successful online teaching in the post-Covid-19 era?

Table 2: Mean and standard deviation of lecturers' perception of the tasks needed to demonstrate the essential skills for successful online teaching in the post-Covid-19 era

S/ N	Items	Mean	Std	Remark
Interaction skill				
1	Guide and maintain interactive discussion	3.61	0.75	Highly Needed
2	Provide timely feedback	3.78	0.75	Highly Needed
3	Encourage peer learning	3.89	0.89	Highly Needed
4	Advice and counsel students	3.63	2.52	Highly Needed

5	Creating respectful relationships and a sense of community among the learners	3.49	0.74	Moderately Needed
Weighted Mean and Std		3.68	1.13	Highly Needed
Management skill				
1	Monitor and evaluate student performance	3.63	0.64	Highly Needed
2	Manage time appropriately	3.51	2.52	Highly Needed
3	Introduce support services to students	3.60	0.68	Highly Needed
4	knowledge of administrative qualities and procedures	3.59	0.72	Highly Needed
5	Tracking course and students' progress regularly	3.51	0.73	Highly Needed
Weighted Mean and Std		3.57	1.06	Highly Needed
Organization/ instructional design				
1	Provide clear learning outcomes, objectives, and expectation	3.63	0.64	Highly Needed
2	Organize materials and activities clearly and well	3.51	0.92	Highly Needed
3	Identify students' learning styles/needs	3.59	0.72	Highly Needed
4	Conduct instructional design effort	3.64	0.81	Highly Needed
5	Present materials and activities	3.58	0.73	Highly Needed
Weighted Mean and Std		3.59	0.76	Highly Needed
Technology Skills				
1	Utilize technology in a competent manner	3.87	0.59	Highly Needed
2	Being aware of the technical potential of, and procedures used to create, e-content.	3.87	1.54	Highly Needed
3	Being alert to the latest updates and renovations of educational technology and software.	3.62	0.64	Highly Needed
4	Accessing various technological resources and tools, such as email, Internet browsers,	3.55	0.64	Highly Needed
5	Understanding the learning and teaching capabilities and limitations of these tools	3.71	0.59	Highly Needed
Weighted Mean and Std		3.72	0.80	Highly Needed
Content Skill				
1	Master in content area	3.59	0.82	Highly Needed

2	Stating learning goals and objectives that coincide with learners' levels and characteristics	3.51	0.91	Highly Needed
3	Drafting and developing learning and assessment activities that align with learning goals and objectives	3.58	0.68	Highly Needed
4	Expressing and mastering extensive knowledge of the content	3.59	0.70	Highly Needed
5	Stating learning goals and objectives that coincide with learners' levels and characteristics	3.41	0.75	Moderately Needed
Weighted Mean and Std		3.54	0.77	Highly Needed
Table 2 continued				
S/N	Items	Mean	Std	Remark
Pedagogical Skill				
1	Adopting the learner-centred approach, and collaborative learning.	3.63	0.52	Highly Needed
2	Designing and implementing appropriate instructional strategies.	3.49	0.74	Moderately Needed
3	Using classroom assessment and student engagement techniques.	3.48	0.76	Moderately Needed
4	Facilitating students' participation.	3.55	0.70	Highly Needed
5	Using criterion-based assessment to evaluate individual and group performance;	3.48	0.76	Moderately Needed
Weighted Mean and Std		3.53	0.70	Highly Needed
Overall Weighted Mean and Std		3.605	0.87	Highly Needed

Table 2 reveals the tasks needed to demonstrate each of the skills listed in Table 1. For interactive skill, Table 2 shows that the respondents indicated that all the tasks are highly needed except for item five which they indicated moderately needed. The respective means of the items are as follows: guide and maintain interactive discussion (mean= 3.61; Std = 0.75), Provide timely feedback (mean = 3.78; Std = 0.75), Encourage peer learning (mean = 3.89; Std = 0.89), advice and counsel students (mean = 3.63; Std = 2.52), and creating respectful relationships and a sense of community among the learners (mean = 3.49; Std = 0.74). Summarily, Table 2 reveals that the tasks listed are highly needed to demonstrate interaction skill (mean = 3.68; Std = 1.13). The low standard deviation shows that lecturers' perception of the tasks to demonstrate interaction skill in an online environment are clustered around the mean. The responses of lecturers indicated that all the tasks listed for management skill are highly needed with their respective mean and standard deviation scores of each item as follows: monitor and evaluate student

performance (mean = 3.63; Std = 0.64), manage time appropriately (mean = 3.51; Std = 2.52), introduce support services to students (mean = 3.60; Std = 0.68), knowledge of administrative qualities and procedures (mean = 3.59; Std = 0.72), and tracking course and students' progress on a regular basis (mean = 3.51; Std = 0.73). The weighted mean and standard deviation scores of tasks for management skill (mean = 3.57; Std = 1.06) shows that the tasks are highly needed.

Table 2 shows that organization/instructional design skill is highly needed (mean = 3.59; Std = 0.76). The breakdown of the tasks under organization skill is as follows: Provide clear learning outcomes, objectives, and expectation (mean = 3.63; Std = 0.64), organize materials and activities clearly and well (mean = 3.51; Std = 0.92), identify students' learning needs (mean = 3.59; Std = 0.72), conduct instructional design effort (mean = 3.64; Std = 0.81), and present materials and activities (mean = 3.58; Std = 0.73). The Table also reveals that the tasks under technology skill are highly needed (mean = 3.72; Std = 0.80). Each task under the technology skill has high mean score. Utilize technology in a competent manner (mean = 3.87; Std = 0.59), being aware of the technical potential of, and procedures used to create, e-content (mean = 3.87; Std = 1.54), being alert to the latest updates and renovations of educational technology and software (mean = 3.62; Std = 0.64), accessing various technological resources and tools, such as email, Internet browsers (mean = 3.55; Std = 0.64), and understanding the learning and teaching capabilities and limitations of these tools (mean = 3.71; Std = 0.59). Table 2 reveals that the tasks to demonstrate content skill are highly needed except for one of the items that is moderately needed. Master in content area (mean = 3.59; Std = 0.82), stating learning goals and objectives that coincide with learners' levels and characteristics (mean = 3.51; Std = 0.91), drafting and developing learning and assessment activities that align with learning goals and objectives (mean = 3.58; Std = 0.68), expressing and mastering extensive knowledge of the content (mean = 3.59; Std = 0.70), stating learning goals and objectives that coincide with learners' levels and characteristics (mean = 3.41; Std = 0.75). The weighted mean and standard deviation (mean = 3.54; Std = 0.77) shows that the tasks are highly needed.

Lastly, the tasks under the pedagogical skills are highly needed with following mean score for each task. Adopting the learner-centred approach, and collaborative learning; (mean = 3.63; Std = 0.52), designing and implementing appropriate instructional strategies (mean = 3.49; Std = 0.74), using classroom assessment and student engagement techniques (mean = 3.48; Std = 0.76), facilitating students' participation (mean = 3.55; Std = 0.70), and using criterion-based assessment to evaluate individual and group performance (mean = 3.48; Std = 0.76). The weighted mean score and standard deviation (mean = 3.53; Std = 0.70) show the tasks are highly needed.

H₀₁: There is no significant difference between the mean rating of male and female respondents on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era.

Table 3: Summary One-way Multivariate Analysis of Variance (MANOVA) of the difference between the responses of male and female respondents of the essential skills and tasks needed for successful online teaching in the post-Covid-19 era

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
t	Intercept Pillai's Trace	.866	682.206 ^a	2.000	211.000	.000	.866
	Wilks' Lambda	.134	682.206 ^b	2.000	211.000	.000	.866
	Hotelling's Trace	6.466	682.206 ^b	2.000	211.000	.000	.866
	Roy's Largest Root	6.466	682.206 ^b	2.000	211.000	.000	.866
Gender	Pillai's Trace	.014	1.535 ^b	2.000	211.000	.189	.004
	Wilks' Lambda	.886	1.535 ^b	2.000	211.000	.189	.004
	Hotelling's Trace	.014	1.535 ^b	2.000	211.000	.189	.004
	Roy's Largest Root	.014	1.535 ^b	2.000	211.000	.189	.004

a. Design: Intercept + Gender

b. Exact statistic

Table 3 reveals that there was no significant difference between the responses of male and female on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era $F(1, 212) = 1.53, P > 0.05$; Wilk's $\Lambda = 0.886$, partial $\eta^2 = 0.04$. This implied that male and female lecturers did not differ significantly in their responses regarding the two dependent variables (essential skills and tasks for successful online teaching in the post-Covid-19) tested in the study.

Table 4: Tests of Between-Subjects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Gender	Essential Skills	.553	1	.553	.506	.478	.002
	Tasks	1.901	1	1.901	1.682	.196	.008

a. R Squared = .002 (Adjusted R Squared = -.002)

b. R Squared = .008 (Adjusted R Squared = .003)

Table 4 reveals that the mean responses for essential skills were not significantly different between male and female lecturers ($F(1,212) = 0.506, p = 0.478, \eta^2 = 0.002$), and the mean score for tasks were also not statistically significantly different between male and female lecturers ($F(1,212) = 1.682, p = 0.196, \eta^2 = 0.008$)

Table 5: Estimated Marginal means

Dependent Variable	Gender	Mean	Std. Error
Essential Skills	Male	2.49	.110
	Female	2.39	.094
Tasks	Male	2.44	.112
	Female	2.24	.095

Table 5 reveals the estimated marginal means of male and female responses on the essential skills and tasks needed for successful online teaching in the post-Covid-19 era. Though, there are mean differences between male and female lecturers' responses on the essential skills (0.10), and tasks (0.20). These mean differences were not statistically significant.

Discussion of findings

The study examined the perception of lecturers of the essential skills for online teaching in the post-covid-19 era. The study found that interaction, management, organisation/instructional design, technology, content and pedagogical skills are highly needed for successful online teaching in the post-covid-19 era. This means that for one to be a successful teacher in an online environment, these skills must be acquired. This finding supports the earlier finding of Hirunu (2005) who found that five of these skills (interaction, management, organisation/instructional design, technology, content skills) are ranked 1-5 as the essential skills for successful online teaching. These skills are very necessary for lecturers who want to be successful in an online environment. Not surprisingly, the ability to stimulate and facilitate interactions is a vital skill that online lecturers should possess. The skill of interaction is ranked first together with management skill in this study. Though some researchers believed that technology is the first skill in online teaching, this is not so in this study as technology skill occupies the third position in the ranking. This ranking also presents a trend that online education is driven by the concerns of students' learning instead of technological concerns. This finding is also in line with Lee and Tsai (2011) who found that content knowledge is very in teaching in an online environment. This implies that in an online environment, educators' mastery in the content area is important as well as their ability to organize and present content information to students, but content skill is more important according to the ranking in this study. This finding supports the earlier finding of Abdous (2011) who stated that effective online instructors should understand the fundamentals of online teaching and possess essential skills such as pedagogical skills, social interaction skills, design skills, content skills and technological skills. It is therefore clear that the six skills listed in this study are essential for successful online teaching.

The study also found that online educators must demonstrate these skills understanding through applying a large number of principles and strategies. This clearly shows that online educators must perform tasks that are relevant to the six skills listed in this study. This finding supports the earlier finding of Albrahim (2020) who listed a lot of

tasks and strategies to demonstrate the essential skills. Such tasks include using different communication methods to ensure accessibility among the instructor and learners, and the learners with their peers; Maintaining a warm, friendly, and inviting collegial atmosphere. Also, Bailie, (2011); Craddock and Gunzelman, (2013) and Fuller and Yu, (2014) all stated that resolving conflicts and misunderstandings amicably; and Offering advice and suggestions and clarifying doubts and suspicions are necessary tasks to demonstrate interaction skill. It was revealed in the study that there are relevant tasks that online educators need to carry out to demonstrate management skill. These tasks include: Monitor and evaluate student performance, manage time appropriately, introduce support services to students, and knowledge of administrative qualities and procedures. This means that possessing management skill for online teaching entails the ability to be able to perform these skills. This finding is in line with Munoz Carril et al. (2013) who stated that by demonstrating management skill for online teaching, the online educator should be able to plan and control the online environment by way monitoring and evaluating the students' performance.

The study also reveals the tasks to demonstrate instructional design skill to include: Provide clear learning outcomes, objectives, and expected, organize materials and activities clearly and well, identify students' learning styles/needs, and conduct instructional design effort. This indicated that instructional design skill cannot be exhibited without these tasks. This finding corroborates the views of Eagleson, and Pfander (2014) who stated listed some of the principles to demonstrate design skill, their principles include: Cooperating with the production team to design learning activities and select appropriate tools and techniques to present these activities; and using students' previous feedback to develop and design new courses and assess the course design quality by using quality assurance tools and instruments, such as the Quality Matters Rubric. Also, Haughton, Sandt, and Slantcheva-Durst (2014) gave some strategies for design skill which an online educator should be conversant with, and that these individuals work collaboratively to produce high-quality online courses.

The study reveals that online educators should skilfully utilize technology, being aware of the technical potential of, and procedures used to create, e-content, being alert to the latest updates and renovations of educational technology and software, and accessing various technological resources and tools, such as email, Internet browsers to be able to demonstrate technical skill for successful online teaching. This finding is in line with the view of Abdous (2011) who stated that online instructors have to possess adequate technological literacy skills to be able to do the following: accessing various technological resources and tools, such as email, Internet browsers, LMSs, text and video chat applications, and productivity software and applications. The study found that relevant tasks must be carried out to show that online lecturer has acquired content skill, such tasks include: Stating learning goals and objectives that coincide with learners' levels and characteristics, drafting and developing learning and assessment activities that align with learning goals and objectives, expressing and mastering extensive knowledge of the content, and stating learning goals and objectives that coincide with learners' levels and characteristics. The finding is related to the list of Abdous (2011) which include: Designing

a teaching proposal at the general level and identify each of its phases or elements; developing and selecting appropriate and varied learning resources that accommodate different learning styles and preferences; linking the subject and content with scientific, social, cultural, and any other relevant phenomena; and developing an inventory of existing content and resources and any additional content and resources that will be needed. Lastly, the study found that the following tasks are needed to demonstrate pedagogical skill: Adopting the learner-centred approach, and collaborative learning; designing and implementing appropriate instructional strategies; using classroom assessment and student engagement techniques; facilitating students' participation; and using criterion-based assessment to evaluate individual and group performance. This is in line with Craddock and Gunzelman, (2013) who stated that the following principles are relevant to demonstrate pedagogical skill: organizing and facilitating students' participation and providing guidance and support as needed; using criterion-based assessment to evaluate individual and group performance; Motivating students and showing enthusiasm and interest, and encouraging knowledge construction based upon learners' prior knowledge and life experience.

Conclusion

Online education is challenging. Lecturers may feel uncomfortable teaching online as a result of the many roles and responsibilities of e-teaching. The study found that interaction, management, technology, content, organisation/instructional design, and pedagogical skills are highly needed for successful online teaching. The study also found essential tasks to demonstrate the skills. Based on these findings, it is concluded that interaction, management, technology, content, organisation/instructional design, and pedagogical skills and the tasks identified are essential for successful online teaching in the post-covid-19 era. This implies that for lecturers to be successful in an online environment, they have to possess these skills by performing the identified tasks sufficiently. Anything short of this will mean that lecturers may find it difficult to teach online courses which have become necessary in the era of covid-19.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Lecturers should use these identified skills to self-evaluate their ability to teach in an online environment and identify their training needs.
2. As the work of academics moves from face-to-face mode to blended and online modes, especially because of covid-19, lecturers should critically question their practices and discuss with their peers the adoption of new pedagogical practices for the new teaching space.

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PERCEIVED PROBLEMS CONFRONTING ONLINE CLASSES DURING COVID-19 ERA IN KWARA STATE

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Abstract

Coronavirus disease (Covid-19) is an infectious disease caused by a newly discovered coronavirus. In 2020 there was a total locked down of all sectors in which education is inclusive. In order not to make students idle during the lock down, the state government in her efforts initiated online classes which aired on radio and television. Despite these laudable efforts by the state government, some hinderances affected online classes as perceived by students. This study adopted a descriptive survey research design. Three research questions were raised and answered with descriptive statistics. There are 16 Local Government Areas in Kwara State. A simple random sampling technique was used to select eight Local Government Areas which is 50% of the total Local Government Areas in the state. The researcher selected one school from each Local Government Area to make the total number of 8 secondary schools. In each school, 15 students were selected regardless of their class. A total number of 120 secondary school students participated in this study. Student's Perception of Problem of Online Classes during the Covid-19 Questionnaire (TPPOCQ-Covid-19) was used. The instrument was validated by some lecturers at the faculty of education, Kwara State University, Malete. The instrument was tested for reliability using the test-retest method and the reliability score of 0.74 was obtained. The results revealed that the attitudes of students towards online classes during covid-19 was negative in Kwara State with a weighted Mean (1.87) among other findings. It was concluded that students have a negative attitude toward online classes during covid-19 in Kwara state. Based on the findings, the following recommendations were made: Government or non-governmental organizations should create enabling environments through the provision of stable internet most especially in remote areas. Parents should provide handsets for their children to enable them to have access to the internet. Philanthropists should assist parents who could not afford mobile phones to provide for them

Keywords: Covid-19, Teaching, Online Learning, Electricity, Internet-connectivity, Computer

Introduction

Coronavirus disease (Covid-19) is an infectious disease caused by a newly discovered coronavirus. The Coronavirus pandemic (COVID-19) has no doubt adversely affected the global economy and education. It has forced many businesses to temporarily

shut down and governments across the world to place a restriction on movement while exempting providers of essential services who are to strictly observe social distancing rules.

The educational sector is a part of the receiving end. An estimated 1.725 billion learners have been affected as a result of school closures, representing about 99.9% of the world's student population as of April 13th, 2020 (UNESCO, 2020). The severe short-term disruption is felt by many families around the world. Homeschooling is not only a massive shock to parents' productivity but also children's social life and learning. Teaching is moving online on an untested and unprecedented scale. Student assessments are also moving online, with a lot of trial and error and uncertainty for everyone. Many assessments have simply been canceled. Importantly, these interruptions will not just be a short-term issue, but can also have long-term consequences for the affected cohorts and are likely to increase inequality.

The recent outbreak of the Coronavirus pandemic increased the gaps in the education sector globally. Though the Coronavirus pandemic is novel, it already has noxious effects on humanity. COVID-19 outbreak has created educational disruptions and global health concerns that proved very difficult to manage by global health systems. Although in recent times, some countries fascinated their citizens against the virus. Despite this, the entire world seems overwhelmed by the speed of the spread and the devastating effects of COVID-19. Going to school is the best public policy tool available to raise skills while school time can be fun and can raise social skills and social awareness from an economic point of view. The primary point of being in school is that it increases a child's ability. Even a relatively short time in school does this; even a relatively short period of missed school will have consequences for skill growth. But it is very difficult to estimate how much the COVID-19 interruption has affected the teaching and learning process.

The COVID-19 epidemic sweeping the the whole world has affected millions of students, whose school closures have more often than not caught pupils, teachers, and parents/ guardians by surprise. For some, it means missing class altogether, while others are trialing online learning often facing difficulties with online connections, as well as motivational and psychosocial well-being challenges. These problems point to a critical gap in school-based contingency planning within broader education sector preparedness planning and emergency management. (<https://www.brookings.edu>, 2020). Education sector preparedness aims to protect students and educators, plan for continuity of education, and safeguard education sector investments, all of which ultimately contribute to strengthened resilience through education. The National Disease Control Center (NDCC) Services preparedness guidance for school-based pandemic suggested that school-based outbreaks often give rise to community-wide outbreaks; thus, planning and practicing for such epidemics are an act of safeguarding not only the health of students and staff but also of the wider community.

One may aware that the rationale behind the teaching and learning activities in a classroom is to bring about a desirable change in learners' behaviour. This change is possibly determined through the extent of the pupils' performance on a learning task or subject (Yusuf, 2019). However, teaching and learning in all Nigerian schools and across the world

have been put to hold because of the COVID-19 virus. Teaching and learning have been put to hold in all the Universities, Poly-techniques, primary schools, secondary schools, and colleges of education in the country as a result of the COVID-19 pandemic. The implication of this was that many Nigerian pupils were not in schools for months implying that they have been idle and to keep them abreast of their academic activities, online classes were created as an alternative way of continuing their learning at their various homes.

Online learning is an educational process that takes place over the Internet. It is a form of distance education to provide learning experiences for students, both children, and adults, to access education from remote locations or who, for various reasons, cannot attend a school, vocational college, or university. Distance education addresses issues related to geographical distance but also for many other reasons which prevent in-person attendance at classes (Hrastinski 2008; Moore et al. 2011; Singh and Thurman 2019; Watts 2016; Yilmaz 2019).

Online learning experiences through distance education can be either asynchronous or synchronous. Asynchronous learning occurs when students can choose their own time for participation in learning through different media tools such as e-mail or discussion boards. Students can log in to complete activities their own choosing time and learn at their own pace. In contrast, synchronous learning activities occur through live video and/or audio conferencing with immediate feedback (Hrastinski, 2008). Whether it is asynchronous or synchronous, online learning has several benefits: For instance, it does not depend on being in the same physical location and can thus increase participation rates. In addition, it can be cost-effective because online learning reduces travel and other costs required to attend in-person classes and also may provide learning opportunities for adult students while also engaged in full-time or part-time jobs (Fedynich 2014; Yilmaz 2019).

Moreover, online learning can be a convenient means for communication among participants as well as instructors because participants do not have to meet in person. Online learning can vary depending on the instructors' or pupils' technological abilities to access online sites and use computers. These problems are more evident for young children or school-age students who may not have online access or who have had limited experience with online learning tools, such as computers (Fedynich 2014; Wedenoja 2020). More so, pupil's online learning, as well as online access, requires adult/parent supervision and, therefore, adult/parent availability and involvement also, network, electricity (Schroeder & Kelley, 2010; Youn et al. 2012). Moreover, online learning may not give sufficient or appropriate opportunities to involve young children who need more interactions and hands-on activities to focus and learn compared to adult learners. A proper timetable is designed for the child for 8:00 am Zoom classes. By 2:00 pm child has to complete the given task of each subject, during that parent need to support the child to complete the school task. Also work from home, parent busy with him. After lunch and nap in the evening, parent and child watch movies or cartoon sometimes and at night some board games with the whole family (Bhamani, Makhdoom, Ali, Kaleem & Ahmed, 2020) Some parents submitted that it is very difficult to manage nowadays. We assigned daily 1 to 1.5 hours to studying at home with worksheets, workbooks, videos, and reading apps, but the school sessions are difficult to manage as we have a grandmother to take care of

the kids at home and she is not so technology-oriented. It is especially challenging if the parents are working from home or offices, and have their schedules to follow. Keeping their children in check all the time, now that house-help is not available has become cumbersome and parents end up allowing the children to do things their way (Bhamani, et al 2020). Al Sumaiti,(2012) revealed that parents are confused as to what is to be expected of them concerning their responsibility and their input in their children's education Hale, Troxel, and Buysse (2020) concluded parents found it difficult and also felt disappointing at helping their kids focusing and joining the classes virtually because of their schedule, electricity and their inability to operate the gadgets for the online class.

Access to affordable electricity is a basic requirement for the development of any learning that is not classroom-based. Too many parts of Africa, particularly rural areas, do not have this access. The poor communities will be completely left behind. With a lack of electricity and limited capacity to buy ICT equipment, this move will only increase the gap between the poor and the rich. There are remote areas where there is no electricity, the roads are inaccessible, and some teachers have never used a computer let alone had access to the internet (e-learning,2020)

One may also be aware that internet connectivity is a way through which people are hooked up to the internet and may include dial-up telephone lines, always-on broadband connections, and wireless access. Thus, Internet connectivity and access to the internet were identified by respondents as one of the most significant obstacles to an effective response. As one respondent, Gabriel from Tanzania, who is a teacher, said there need for the internet is no longer a luxury possession to be priced high but a necessity at this juncture as an enabler platform for teaching/learning activities to strive.

The accessibility and affordability of connectivity are as important as the supply of electricity, although connectivity is very difficult without a reliable electricity supply. Whilst poor communications infrastructure was identified as a particular problem for accessing distance education, 40% of respondents said the availability or affordability of connectivity was the biggest barrier to using technology effectively for education during the crisis. However, providing universal access to reliable and affordable connectivity is not a simple task. African countries are often large and with diverse geographies: coastal, Riverine, plains, jungles and mountains are sometimes all found in a single country. Building sufficient masts for even 2G communications is expensive and this is reflected in the cost of data to users, therefore, encumbered some of the online classes created by non-governmental organization and government especially in Nigeria(e-learning Africa,2020) Some students without reliable internet access and/or technology struggle to participate in digital learning; this gap is seen across countries and between income brackets within countries. For example, whilst 95% of students in Switzerland, Norway, and Austria have a computer to use for their schoolwork and online classes during covid-19 which made it very convenient and comfortable for them to learn while, countries like Indonesia, Nigeria, did not. There was a significant gap between those from privileged and disadvantaged backgrounds virtually all 15-year-olds from a privileged background said they had a computer to work on, nearly 65% of those from disadvantaged backgrounds did not have a computer and were unable to connect over the internet for online class during covid-19

especially in Nigeria (OECD, 2020). Hence, this investigated perceived problems confronting online classes during covid-19 in Kwara state

Statement of the Problem

Coronavirus disease (Covid-19) is an infectious disease caused by a newly discovered coronavirus. The Coronavirus pandemic (COVID-19) has no doubt adversely affected the global economy. It has forced many businesses to temporarily shut down and governments across the world to place a restriction on movement while exempting providers of essential services who are to strictly observe social distancing rules while providing services as a way to curtail the spread of the virus. It was discovered that the government made efforts during the lock down to teach students online. With these efforts, a lacuna was evident in the aspect of teaching and during lock down with online classes and this inspired the present study.

Teaching and learning have been put to hold in all the Universities, Polytechniques, primary schools, secondary schools, and colleges of education in the country as a result of the COVID19 pandemic. The implication of this was that many Nigerian students were not in schools for months implying that they have been idle and to keep them abreast of their academic activities, online classes were created as an alternative way of continuing their learning at their various homes. Despite all these efforts, parents' attitudes, internet connectivity, electricity, and access to computers/smartphones seem to have jeopardized the efforts. Thus, this study investigated the problems confronting online classes during covid-19 in Kwara State.

Research Questions

1. What is the attitude of students towards online classes during the covid-19 Era?
2. Were students able to connect to the internet regularly during the covid-19 Era?
3. Do students have access to a computer/Smartphone for online classes during the covid-19 Era?

Methodology

This study adopted a descriptive survey research design. There are 16 Local Government Areas in Kwara State. A simple random sampling technique was used to select eight Local Government Areas which is 50% of the Local Government Areas in the state; one school was selected in each of the Local Government areas to make the total number of 8 local government areas.

Fifteen secondary school students were selected using the accidental sampling technique in each school regardless of the class they are. A total number of 120 students were selected as respondents in this study. Student's Perception on Problem of Online Classes during the Covid-19 (STPPOCQ-Covid-19) questionnaire was used. The instrument was administered to students to elicit their views on problems of covid-19 in Kwara state. The instrument was validated by 6 lecturers at the Faculty of Education, Kwara State University, Malete. The instrument was tested for reliability using the test-retest method. Therefore, Pearson Product Moment Correlation (PPMC) was used to determine the

reliability coefficient of the instrument, and a reliability score of 0.74 was obtained. The research questions raised were answered using frequency count, mean, and percentage.

Results

Research Question One: What is the attitude of students toward online classes during covid-19?

Table 1: Frequent count, mean, and percentage showing the attitude of students towards online classes during covid-19 Era

S/N	Students Attitude	SA	A	D	SD	MEAN
1	I did not create time for the online classes during covid-19	9(7.5)	56(46.7)	25(20.8)	30(25.0)	2.37
2	I did not know how to go about online classes during covid-19 for their wards	3(2.5)	9(7.5)	39(32.5)	69(57.5)	1.55
3	Online classes during covid-19 was a waste of time and resources	6(5.0)	16(13.3)	34(28.3)	64(53.3)	1.70
4	It does not matter as to whether I attend online classes during covid-19 before I excel in the academic activities	2(1.7)	18(15.0)	23(19.2)	77(64.2)	1.54
5	Online classes during covid-19 were not designed for the low-income earners because it carried huge financial maintenances	7(5.8)	43(35.8)	36(30.0)	34(28.3)	2.19
Weighted Mean						1.87
Internet Connectivity						
6	I don't have access to internet connection in our locality	13(10.8)	15(12.5)	33(27.5)	59(49.2)	1.85
7	Connectivity to the internet was difficulty because of the inactive of the internet	12(10.0)	26(21.7)	31(25.8)	51(42.5)	1.99
8	Living in a remote area therefore did not enjoy the online classes due to the fluctuation of the network	36(30.0)	11(9.2)	15(12.5)	58(48.3)	2.21
9	The information was not properly communicated therefore did not know how to connect to the internet for online classes	29(24.2)	37(30.8)	29(24.2)	25(20.8)	2.58
10	Connection to the internet usually consume my Smartphone battery thus did not	6(5.0)	15(12.5)	14(11.7)	85(70.8)	1.52

	like to connect to internet for any information					
	Weighted Mean					2.03
	Access to Computer/Smartphone					
11	I don't have computer nor Smartphone	7(5.8)	5(4.2)	26(21.7)	82(68.3)	1.48
12	My parents did not provide computers to facilitate online classes during covid-19	19(15.8)	14(11.7)	12(10.0)	75(62.5)	1.81
13	I don't know how to operate either computer, Smartphone, or television for online classes during covid-19	11(9.2)	7(5.8)	16(13.3)	86(71.7)	1.53
14	I am not trained on how to use computer for online classes during covid-19	16(13.3)	17(14.2)	28(23.3)	59(49.2)	1.92
15	My computers, Smartphone/television damage through power surge therefore hindered me to join online classes	36(30.0)	42(35.0)	29(24.2)	13(10.8)	2.84
	Weighted Mean					1.92

Decision rule: negative=00-2.49 positive= 2.50-4.00

Note: The figures in parentheses are in percentages

Table 1 shows the responses on the attitude of students towards online classes during covid-19 in Kwara State. It was indicated that the following items were negative: I did not create time for online classes during covid-19 (Mean=2.37), I don't know how to go about online classes during covid-19 (Mean=1.55), Online classes during covid-19 was a waste of time, and resources (Mean=1.70), It does not matter as to whether I attend to online classes or not during covid-19 (Mean=1.54) and Online classes during covid-19 was not designed for the low-income earners because it carried huge financial maintenances (Mean=2.19). Therefore, the attitude of students towards online classes during covid-19 in Kwara State was negative. The weighted mean (1.87) which is the numeric indicator that the attitudes of students toward online classes during covid-19 was negative in Kwara State

Research Question Two: Were you able to connect to the internet regularly during the covid-19 Era?

Table 1 shows the responses on whether students were able to connect to the internet regularly during covid-19 in Kwara state. It was indicated that the following items were negative: I don't have access to an internet connection in our locality (Mean=1.85), Connectivity to the internet was difficult because of the inactive of the internet(Mean=1.99), We are living in the remote area, therefore, we did not enjoy the online classes due to fluctuation of the network (Mean=2.21) and Connection to the

internet usually consume my Smartphone battery thus I don't like to connect to the internet for any information (Mean=1.52). While the following item was positive: The information was not properly communicated therefore I don't know when to connect to the internet for online classes (Mean=2.58). Therefore, the students were not able to connect to the internet regularly during covid-19 in Kwara state. The weighted mean (2.03) is the numeric indicator that students were not able to connect to the internet regularly during covid-19 in Kwara state.

Research Question Three: Do students have access to computer/Smartphone for online classes during covid-19

Table 1 shows the responses of the students whether they access to computer/Smartphone for online classes during covid-19 in Kwara state. It was indicated that the following items were negative: I don't have a computer or Smartphone (Mean=1.48), Government did not provide computers to facilitate online classes during covid-19 (Mean=1.81), I don't know how to operate either computer, Smartphone or television for online classes during covid-19 (Mean=1.53) and We are not trained how to use a computer for online classes during covid-19 (Mean=1.92). While the following item was positive: My computers, Smartphone/ television damage through power surge, therefore, hindered me to join online classes (Mean=2.85). Therefore, the people's accesses to computers/smartphones for online classes during covid-19 in Kwara state were negative. The weighted mean (1.92) which is the numeric indicator that students don't have accesses to computer/Smartphone for online classes during covid-19 Era.

Discussion of Findings

The result emanated from the findings of this study stated that the attitudes of students towards online classes during covid-19 were negative in Kwara State. The reason for this finding could be that some students who responded to the questionnaire felt that they did not have time for online classes. This was in agreement with the submission of Bhamani, et al (2020) who submitted that students found it difficult to manage nowadays especially to assigned daily 1 to 1.5 hours to studying at home with worksheets, workbooks, videos, and reading apps, but the school sessions are difficult to manage as we have a grandmother to take care of the kids at home and she is not so technology-oriented. It is especially challenging if the parents are working from home or offices, and have their schedules to follow.

Keeping their children in check all the time, now that house help is not available has become cumbersome and parents end up allowing the children to do things their way. It has also concurred with Al Sumaiti, (2012) who revealed that parents are confused as to what is to be expected of them concerning their responsibility and their input in their children's education and also in line with Hale, Troxel, and Buysse (2020) concluded parents found it difficult and also felt disappointing at helping their kids focusing and joining the classes virtually because of their schedule, electricity and their inability to operate the gadgets for the online class. While also is contrary to one of the findings of Bhamani, et al, (2020) who argued that a proper timetable is set where my child wakes up

at 8:00 am as he has Zoom classes. Till 2:00 pm he has to complete his given task of each subject, during that we both sit together to give my support in completing the school task. I also work from home so I am busy with him. After lunch and nap in the evening, we watch movies or cartoon sometimes and at night some board games with the whole family. Another finding from this study says that students don't have access to the internet during online classes during covid-19 in Kwara state. This finding concurred with the e-learning Africa,(2020) who maintained that accessibility and affordability of connectivity are as important as the supply of electricity, although connectivity is very difficult without a reliable electricity supply. Whilst poor communications infrastructure was identified as a particular problem for accessing distance education, 40% of respondents said the availability or affordability of connectivity was the biggest barrier to using technology effectively for education during the crisis.

Other findings from this study revealed that students did not have access to computer/Smartphone for online classes during covid-19 in Kwara state. The findings were not agreed with OECD, (2020) who said that students in Switzerland, Norway, and Austria have a computer to use for their schoolwork and online classes during covid-19 which made it very convenient and comfortable for them to learn while, also supported the countries like Indonesia, Nigeria, etc who did not. It was also not aligned with OECD,(2020) who found that there was a significant gap between those from privileged and disadvantaged backgrounds virtually all 15-year-olds from a privileged background said they had a computer to work on and also aligned with OECD, (2020) who submitted that nearly 65% of those from disadvantaged backgrounds did not have computer and were unable to connect over the internet for online class during covid-19 especially in Nigeria

Conclusion

Based on the discussion above, it was concluded that students' perception of online classes during COVID-19 was negative. Students didn't have access to the internet and some didn't have smartphone/computer

Recommendations

In the light of this conclusion, the following recommendations were made:

1. Government or non-governmental organization should create enabling environment through the provision of stable internet, computers to schools and colleges to ease the academic activities in the school environment and among the pupils especially for the pupils from the remote area before another lockdown
2. Students should be taught through blended learning which gives room for physical and online classrooms after covid-19 to get familiar with online classes.
3. Parents should provide handsets for their children to enable them to have access to the internet. Philanthropists should assist parents who could not afford mobile phones.



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CHALLENGES OF HIGHER INSTITUTIONS IN NIGERIA TOWARDS DIGITAL LEARNING FOR QUALITY EDUCATION IN THE POST COVID-19 PERIOD

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Abstract

Quality education which is very important for an individual's success in life, is under threat as a result of Covid-19 pandemic that has disrupted the academic activities owing to its social distancing rule. Alternatively, Universities worldwide has embraced digital learning in order to sustain the academic activities. However, Higher institutions in Nigeria were then under lock and keys in view of poor or lack of digital learning equipment and experts. This paper ascertains the challenges of higher institutions in Nigeria towards digital learning for quality education in the post covid-19 Period. Descriptive research design was used to analyze the research questions. The population of the study comprised of all the Lecturers in Public and Private Universities in Kwara State teaching Office Technology and Management Subjects i.e. 28 and 16 respectively. The sample for this study comprised of 19 OTM Lecturers from Public Universities and 12 OTM Lecturers from Private University randomly selected. A self-designed Questionnaire was administered to elicited information from the respondents. The finding showed that there are innumerable challenges to digital learning in Nigeria due to poor digital infrastructure, other socio-economic factors and the poor coordination of educational sector among others. The study suggested that higher educational institutions should provide a flexible mechanism to teach their practical and theoretical curricula; governments must provide financial grants and pour money into higher institutions of learning in the country for the purpose of procuring digital learning materials among others

Keywords: Digital-learning, Covid-19 pandemic, Quality education

Introduction

Education is very important for an individual's success in life. It can give a big impact on human opportunity in continuing their life quality. Education is generally seen as the foundation of society which brings economic wealth, social prosperity and political stability. Economic and social status depends on education obtained by individual since education contributes to individual capability in managing quality of life. It can help one's individual to avoid from poverty, build up harmony and democracy society. Education also capable to give power for them to voice out. Education has remained the bedrock of any nation being an instrument for national transformation and development. In this regard, Ijaiya (2014) opined that the worth of any educational system as an investment lies in its capacity to continuously serve its customers (students, parents, employers or labour, the society) better and remain relevant. It is on this basis that the quality of education will be assessed. Today, more than ever before in human history, the wealth or poverty of nations depend on the quality of their citizen's education. Those with a big repertory of accomplishments and greater learning capacity can count forward to a lifetime of unprecedented economic fulfillment.

The global health pandemic has shined a harsh light on the vulnerabilities and challenges humanity faces. It has provided a clear picture of existing inequalities and a clearer picture of what steps forward we need to take, chief among them addressing the education of more than 1.5 billion students whose learning has been hampered due to school closures. Education is the key to move in the world, seek better jobs and ultimately succeed in life. Education is the best investment for the people because well educated people have more opportunities to get a job which gives them satisfaction. Educated individuals enjoy respect among their colleagues and they can effectively contribute to the development of their country and society by inventing new devices and discoveries. Main purpose of education is to educate individuals within society, to prepare and qualify them for work in economy as well as to integrate people into society and teach them values and morals of society. Role of education is means of socializing individuals and to keep society smoothing and remain stable. Education in society prepares youngsters for adulthood so that they may form the next generation of leaders.

Higher-educational institutions include not only universities and colleges but also various professional schools that provide preparation in such fields as law, theology, medicine, business, music, and art. Higher education also includes teacher-training schools, junior colleges, and institutes of technology. Studying at university or college can help make young people more independent, as they learn to manage their own money and time much more than they might have had to previously. The social aspect of higher education is also of benefit to students, as they meet likeminded people and form new friendships. Universities and colleges also offer an array of extra-curricular activities for their students to get involved in, which is a great way to further an existing interest, or try something new in addition to meeting new people.

Digital learning is an age-old pedagogical approach in Nigeria. Nigerian educational sector has been embracing changes in terms of ICT application in the learning process as far back as before the Nigerian independence in 1960 (Ajadi, Salawu. &

Adeoye, 2008). Thereafter, many other digital learning programs were organized such as the English Radio programme of Nigeria Broadcasting Corporation in 1960 which was primarily targeted at primary and secondary school levels and covered core courses (learning of Science, Mathematics and English) and the University of the Air Program of the Ahmadu Bello University in 1972 (Mac-Ikemenjima, 2005). Also, there existed the Correspondence and Open Studies Unit (COSU) of University of Lagos that started in 1974 which is now known as Distance Learning Institute (Ajadi et al, 2008). According to Ajadi (2008), it initially offered programs in science education at first degree level and Postgraduate Diploma in Education (PGDE) for degree holders that did not possess teaching qualifications and thus, became the first attempt made to establish a distance education unit as part of University programs in Nigeria.

Most educational institutions in Nigeria are currently based only on traditional methods of learning including schools, colleges and universities (Kazeem, 2020). This means that they follow the traditional set up of face-to-face lectures in a classroom. However, some academic units have introduced the use of technology to facilitate academic activities and revamp old procedures. For instance, the face of educational sector in Nigeria is changing gradually as evident in the obvious progress of the National Open University of Nigeria (NOUN), a distance learning institution whose course delivery is digitally facilitated through a combination of Web-based modules, textual materials, audio and video tapes as well as CD-ROMs (Mac-Ikemenjima, 2005). More so, so many universities now have approved Distance Learning Centres (National Universities Commission, 2020) and as well use digital learning tools for their semester exams. As reported by Ajikoba (2017), over five hundred thousand students gain admission into various tertiary institutions in Nigeria each year through computer-based exam of the Joint Admission and Matriculation Board (JAMB). These and many more are responsible for the gradual exposure of the students, academics and institutions to the digital world.

According to Kazeem, (2020), the level of digital learning in Nigeria is still at a low ebb due to the resistance to change from traditional pedagogical methods to more innovative, technology-based teaching and learning methods by the educational sector. Although many academic units have also started synthesizing learning but a lot of them are still stuck with old procedures. This is not far connected from the facts that there is inadequate ICT infrastructure, the educational sector is generally underfunded, poor and limited expertise, lacks effective co-ordination of the various ICT for education initiative and as well the overdependence of educational institutions on government (Aduke, 2008). For instance, Digital readiness indicates a nation's ability to implement digital learning and harness advantage of ICT. However, Nigeria ranks 79th out of 80 countries in the Economist Intelligence Unit's Technological Readiness Ranking for 2018. From this survey, Nigeria's infrastructure is far from being adequate for digital learning. Hence, one can say that Nigeria is an ICT emerging country.

Deducing from the above, the COVID-19 pandemic in line with its social distancing status opened up wider the need for digital learning which has before now been in neglect and abandoned owing to the deplorable state of our infrastructure and educational sectors. The COVID-19 further exposed the worsening educational sector of

Nigeria and provided the need to improve on the system which serves as the only panacea to the public amidst coronavirus pandemic. Therefore, there is need for educational institutions to remain resilient and find new ways to continue with teaching-learning activities (Chang-Richards et al., 2013). Hence, fully embracing digital learning is not only necessary but also a last resort.

The Coronavirus crisis and the resulting closures affected almost every sector of the global economy, and these crises have caused some sectors to turn upside down. Perhaps one of the most directly affected by this process is the higher education sector. The outbreak of the Coronavirus epidemic has led to a major educational crisis due to the closure of schools and universities around the world and the disruption of formal education services, as more than 290 million students around the world have been directly affected Warren, (2020). Many countries have decided to close schools, colleges, universities, and all educational institutions to reduce affection rates. Here, the basic dilemma arises in the need for governments to choose between two options: either closing educational institutions, preserving lives, and limiting direct contact, or keeping them open to mitigate the devastating economic, scientific and cognitive effects resulting from their closure. It is not easy for all members and stakeholders in educational institutions to make such a decision or even transfer education to the distance education system, as it is not easy for families and students to accept that the educational process takes place entirely from home, so it is very difficult for parents and students to accept this direct transfer in the method of delivery for the education system (Holzberger, Philipp, & Kunter, 2013)..

Coronavirus also caused unprecedented shocks in the higher education system, and more clearly, not all students, not even universities, teaching and administrative bodies, were able to change and move to this completely new system, and the students' societies did not accept this change too. It is hard to request from physics professors to prepare lectures and equations using the Zoom program because this method is completely brand new to them. It is also difficult for all students to accept this shift in which, they are requested to attend a full program of study, lectures, and register attendance while they are in front of a laptop or mobile screen. This topic needs studies in behavioral psychology and restrict student distraction as much as possible. An example of this is what will the student do during a physics lecture that he attends on the Zoom program on his mobile device if his girlfriend sends him a message? What will the professor presenting this lecture do in the event of a technical error on the laptop or in the communication program? These problems are an integral part of a complex behavioral and social system that all parties to the educational process must be prepared to accept and understand.

All members and stakeholders of the educational process must be informed that we are facing an international dilemma and a catastrophic epidemic, and we must all try to participate in accepting intermediate solutions to overcome these difficulties. In this regard, we are not proposing that what is happening is not problematic, or that dealing with this new system is very simple, as this educational system represents a new challenge for all parties. We are almost certain that educational institutions are not at all happy with this new educational system. What calms us is that we cannot do anything to change this new reality. Pai, & Tu, (2011) maintained that universities must encourage and support the

teaching staff to overcome the psychological, emotional, and physical difficulties of the virus among students because for those students, the future is vague, unclear, ominous, and uncertain, and there are no good predictions at all, as these students will enter the labor market that has been almost halted and stopped mainly due to the virus.

Embracing digital learning prior to the COVID-19 pandemic was more of a choice this owes to the fact that the digital world was increasingly penetrating the educational domain with technology gradually being used to teach and learn (Aristovnik, Keržič, Ravšelj, Tomaževič, & Umek, 2020). But today, it has become a necessity. China for example swiftly and successfully adopted this courtesy of the fact that digital learning in Chinese universities has increased exponentially after the Covid-19 outbreak (Kazeem, 2020). Nonetheless, the digital infrastructural backwardness and the unpreparedness of some educational sectors mostly in developing nations such as Nigeria to totally embrace such change have almost made continuing education through digital modalities unfeasible. With this, there is an exposition and recognition of the increasing importance of online learning in not only in this dynamic world but also in emergency. This corroborates the view John F. Kennedy that in as much as an emergency situation comes with challenges, that an inward look will present the opportunity therein (Oyedele, 2020). It has revealed the weaknesses of the Nigerian educational sector and the need to rethink and review existing education infrastructure as learning has become an activity that that can be carried out irrespective of time and places amidst the pandemic, with the support of digital tools. Now is an opportunity to improve standards, contribute to knowledge-based economies, enrich learning potentials, facilitate personalized learning and in all, transform pedagogy to make it more student-centered in line with the global standard (Fullan, 2013; Hammond, 2013). Therefore, the adoption of digital learning is very 6 crucial to ensuring the continuity of education in Nigeria which demands working on our digital infrastructure, up-skilling staff and expanding their capabilities.

One positive short-term development is that universities worldwide have responded dynamically to the pandemic, generously contributing their scientific knowledge and resources to help fight COVID-19. Within weeks of the virus' initial onslaught, universities developed a faster and cheaper COVID-19 test and donated surplus equipment to hospitals. Laboratories within universities also have been busy producing medical supplies, sanitizing equipment, and medicines. Universities all over the world have helped with genome sequencing, coronavirus testing, and production of low-cost ventilators. They also have been at the forefront of epidemiological research and communication. The public information role of universities during the pandemic is all the more important as many people across the world have fallen prey to fake news disseminated in the social media, often with dangerous or even fatal consequences.

Statement of the problem

Education has remained the bedrock of any nation being an instrument for national transformation and development. In this regard, Onwuegbuchi, (2018) asserted that a country that toys with the education of her citizens is going to experience dwindled development and will invariably be ranked low among the developed nations of the world.

Issues surrounding digital learning in the educational sector have received extensive attention globally especially with the COVID-19 outbreak. This raised a global concern and necessitated the adoption of digital learning since the COVID-19 has come to stay. According to Ali (2020), educational institutions worldwide are moving more and more towards digital learning. However, educational sectors in Nigeria can hardly follow suit due to some limitations.

Purpose of the Study

The purpose of this study is to seek for the opinion of Lecturers in Public and Private Higher Institution on the challenges of Higher Institutions in Nigeria towards digital learning for quality education in the post COVID-19 period.

Research Questions

The following questions was set out to be answered in the course of this study: What are the challenges facing Higher Institutions in Nigeria towards digital learning for quality education in the post COVID-19 period?

Research Hypotheses

The following research hypothesis was tested at 0.05 level of significance:

- H₀₁:** There is no significant difference in the responses of the Lecturers in Public and Private Higher Institution regarding the challenges facing Higher Institutions in Nigeria towards digital learning for quality education in the post COVID-19 period.

Methodology

Descriptive survey design was used for the study. The population of the study comprised of all the Lecturers in Public and Private Universities in Kwara State teaching Office Technology and Management Subjects i.e. 28 and 16 respectively totally 44. The sample for this study comprised of 19 OTM Lecturers from Public Universities and 12 OTM Lecturers from Private University randomly selected. A self-designed Questionnaire tagged “Challenges of Higher Institutions in Nigeria towards Digital Learning for Quality Education in the Post Covid-19 Period (CHINDLQEPCR) was administered to elicit information from the respondents. The items of the research question were placed on a modified four-point Likert scale of Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD). The scales were scored with 4 points, 3 points, 2 points, and 1 point respectively.

The first author did the introduction and the literature review, the second author did the analysis and interpretation of data while the third author did the administration and collection of research instrument. All the authors participated in the conclusion and recommendations.

Results

Research Question: What are the challenges facing Higher Institutions in Nigeria towards digital learning for quality education in the post COVID-19 period?

Table 1: Mean and standard deviation of responses on the challenges facing Higher Institutions in Nigeria towards digital learning for quality education in the post COVID-19 period?

S/N	Challenges facing Higher Institutions in Nigeria towards digital learning for quality education in the post COVID-19 period	Mean	SD	Remark
1.	Epileptic power supply	3.68	0.72	Strongly Agreed
2.	Erratic internet networks	3.71	0.46	Strongly Agreed
3.	Upgrade of instructional facilities.	3.61	0.50	Strongly Agreed
4.	Limited access and penetration of the Internet,	3.32	0.48	Agreed
5.	Lack of training on the use of digital infrastructural material.	3.50	0.51	Strongly Agreed
6.	Students and lecturers positive attitudes towards digital learning.	3.43	0.50	Agreed
7.	Grossly inadequate information and communication technology.	3.71	0.46	Strongly Agreed
8.	Infrastructure decay.	3.79	0.42	Strongly Agreed
9.	Inability of Teaching and technical staff to deliver online lectures in line with management of online examination.	3.36	0.62	Agreed
10.	Universities being ill-equipped for online education.	3.64	0.68	Strongly Agreed
11.	Lack of plan for re-evaluation of the curriculum to institute changes if required.	3.50	0.58	Strongly Agreed
12.	Arbitrary neglect in the areas of inadequate funding.	3.14	0.45	Agreed
13.	poverty level of many students which up till now remain a stumbling blocks to digital learning in Nigeria.	3.86	0.36	Strongly Agreed
Weighted Average		3.56	0.52	Strongly Agreed

Source: Field Survey, 2021

Analysis from the Table above revealed that there are innumerable challenges to digital learning in Nigeria due to poor digital infrastructure, other socio-economic factors and the poor coordination of educational sector. For these reasons, Nigeria is still very far from fostering digital learning successfully alongside other developing nations of the world. One of the major problems facing the proper adoption of digital learning in Nigerian educational institutions in general is poor technical infrastructure. The technical infrastructure in Nigeria is not highly developed, which means that phone-lines and internet connections are unreliable or slow due to narrow bandwidth.

Table 2: Paired-Samples t-test result of mean difference between responses of Lecturers in Public and Private Universities regarding the Challenges facing Higher

Gender	N	Mean	SD	t-cal	Df	Sig (2tailed)	Decision
Private Uni. Lecturers	12	3.53	0.42	-3.419	30	0.009	Not Rejected
Public Uni. Lecturers	19	3.91	0.09				

Source: Field survey, 2021

Table 2 revealed that Business Education lecturers had mean and standard deviation responses of 3.53 and 0.42, respectively, while verbatim reporters had mean and standard deviation responses of 3.91 and 0.09 respectively. The calculated value of t was -3.419 ($t_{30} = -3.419$). The observed p-value was 0.009 which is less than the fixed p-value of 0.05 ($p < 0.05$). Therefore, the null hypothesis, which stated that, there is no significant difference between the mean responses of Business Education lecturers and verbatim reporters regarding the strategies for integrating verbatim reporting into Business Education curriculum in North-central Nigerian Universities, was rejected. Hence, the inference drawn was that business education lecturers and verbatim reporters did not differ significantly in their opinion on the strategies for integrating verbatim reporting into Business Education curriculum in North-Central Nigerian Universities.

Discussion of Findings

From Table 1 above, it could be seen that Epileptic power supply has a Mean of 3.71 meaning that both the Private and Public University Lecturers are greatly in support that Epileptic power supply is a major challenge to Digital Learning. Also, erratic internet networks with a Mean of 3.71 received a mass support of both the public and private lecturers as an impediment to digital learning. Limited access and penetration of the Internet, has a Mean of 3.79 meaning that both the public and private university lecturers were of the opinion that for digital learning to take place there must be unlimited access and penetration of the Internet. Students and lecturers positive attitudes towards digital

learning with Mean of 3.86 indicated that majority of the public and private university lecturers were of the opinion that for digital learning in Nigerian universities to be successful there must be Students and lecturer's positive attitudes and cooperation.

Findings in Table above, revealed that nine out of the thirteen questionnaire items were strongly agreed to with a weighted average of 3.56 while the rest four items were agreed to with a weighted average of 0.52. All things being equal, the analysis revealed that all the items were agreed to by both the Public and Private University Lecturers as challenges of higher Institutions in Nigeria towards digital learning for quality education in the post COVID-9 period.

Findings from the hypothesis proved that the observed p-value was 0.009 which is less than the fixed p-value of 0.05 ($p < 0.05$). Therefore, the null hypothesis, which stated that, there is no significant difference between the mean responses of Public and Private University lecturers regarding the challenges facing Higher Institutions in Nigeria was rejected.

Conclusion

Education as a key to National development cannot be relegated to the background but must be fully funded and adequately equipped to face the challenges of sustainable development goal. The COVID-19 pandemic in line with its social distancing status created the need for digital learning which has before now been in neglect and abandoned owing to the deplorable state of our infrastructure and educational sectors. The COVID-19 further exposed our worsening educational sector and provided the need to improve on the system which serves as the only panacea to socio-economic development of any nation hence the urgent need to technologically advance the sector through adequate funding, government should invest in infrastructure, while training and retraining lecturers on new technology applications are imperative to making the switch possible if we must be like Institutions in developed countries of the world that were able to adapt because they had the funding and the basic ICT infrastructure to do so.

Recommendations

1. Higher educational institutions should provide a flexible mechanism to teach their practical and theoretical curricula.
2. Governments must provide financial grants and pour money into higher institutions of learning in the country for the purpose of procuring digital learning materials
3. Higher institutions in the country must automate all educational resources, all documents, and supporting documents, keep backup copies of these documents and papers for reference purpose.
4. Faculties of Technology and Informatics in universities must design specialized programs to connect students with teachers and to automatically save lectures either through special Google Drive links or by direct uploading to the university's specialized channels on the Internet or on YouTube.
5. Universities must focus on information security and protecting their databases in these difficult circumstances.

6. Universities should focus on behavioral psychology to facilitate and clarify the transition to the new teaching methodology and facilitate this task for students and university faculty and administrative staff.

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ADEQUACY OF ICT FOR EFFECTIVENESS OF ONLINE TEACHING AND LEARNING – POST COVID'19 IN OGUN STATE PUBLIC TERTIARY INSTITUTIONS

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Abstract

This paper investigated the adequacy of existing ICT structure to effective online teaching and learning among public tertiary institutions in Ogun State - Post Covid'19. Using parameters like availability of Virtual Learning Centers (VLCs), Internet and Intranet services, conduciveness of learning environment and management commitment, to measure the effectiveness of online teaching. The study proxies authentic learning, mental model and internal motivation as parameters for measuring effective leaning. A multistage sampling technique was used to sample 300 higher level students from 300 level and workforce of ICT unit of the selected institutions. Questionnaire was used as the main research instrument for the study and Regression model was used as the analytical technique. It was found that all the investigated effective-teaching parameters were statistically significant to measure teaching effectiveness. However, the availability of Virtual Learning Centres (VLCs), internet and intranet services, conduciveness of learning environment and management commitment to measure the effectiveness of online teaching were found to be inadequate to guarantee effective online teaching and learning among public tertiary institutions in Ogun State - Post Covid-19. It is therefore recommended that ICT structure for teaching and learning among public tertiary institutions in Ogun State should be resuscitated in order to blend with the new norm in the academic system.

Keywords: ICT, On-line Teaching/Learning, Post COVID'19, Public Tertiary Institutions.

Introduction

Technological development and the internet have greatly changed the lives of people and also brought a great change in various fields especially in the educational sector (Nadikattu, 2020), Technology has greatly played a role during the present covid'19 pandemic especially in the educational sector in the areas of teaching. According to UNESCO (2020), different countries throughout the globe have introduced several solutions in this pandemic to sustain the educational system. TV broadcast, Online libraries (resources, guidelines), online channels, video lectures etc, were highly introduced in



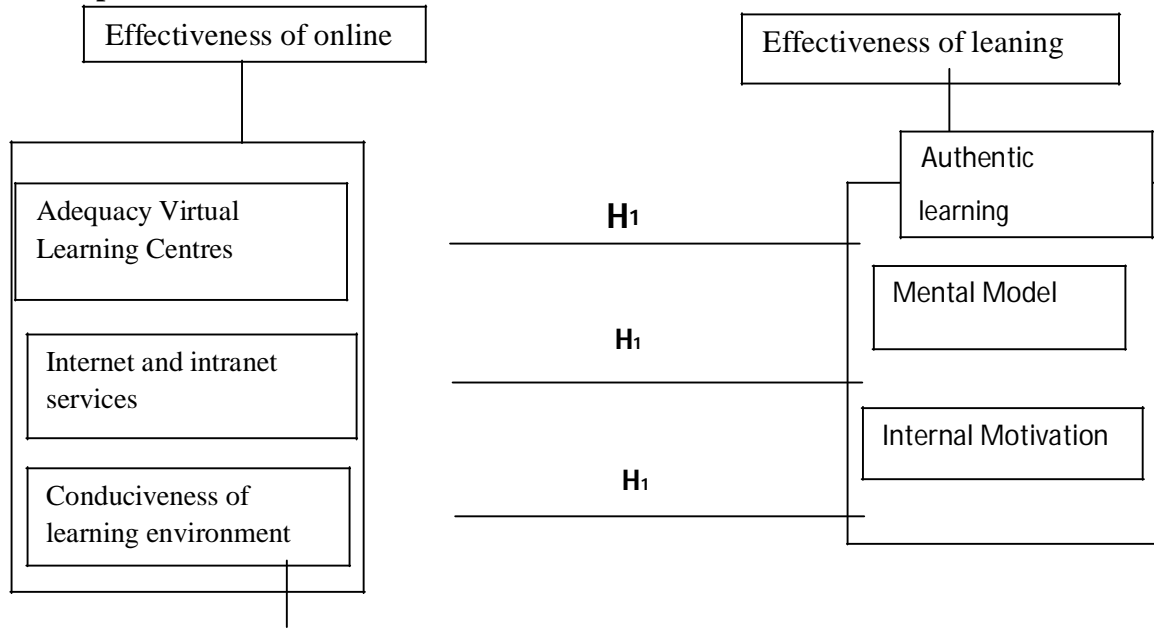
about 96 countries. The quality of E-learning needs much improvement. Due to the sudden out-break of COVID-19, there was insufficient time to assess the quality of the E-learning or online teaching-learning process because the focus was to save and continue the education process at any cost and in all possible format during the global crisis. UNESCO portal on COVID-19 provided immediate support to many countries across the globe to facilitate the learning-continuity and minimize the disruption of education. (UNESCO. 2020).

The Coronavirus, according to Edsource (2020) has caused an enduring threat to our educational institutions from kindergarten to tertiary level and day by day exacerbated the teaching and learning. The goal of education processes is to educate students. Online programs, however, were developed to provide access and flexibility to education, not to provide education itself. In many ways, education is a secondary goal in online delivery. According to Okele (2008) in Kehinde & Olatunde (2018), E-Learning or Online Learning as a sub-system within ICT is the electronic administration of learning opportunities and support using computer network and web-based technology to boost individual performance and development. The basic principle of e-learning is connectivity which is the process by which computers are networked to share information which can connect people.

The introduction of lockdown and social distancing was enforced as basis for curtailing corona virus infection and this had resulted in the complete breakdown of activities world-wide. Lockdown is a common buzzword that has been mulled over by the people during corona pandemic. Lockdown is a state of the emergency protocol implemented by the competent authorities (in this case it is central and state governments) to restrict people from leaving their place of living resulting in mass quarantines and stay-at-home across the world since March 2020. To get control over COVID-19 pandemic is possible to a greater extent with people's unbridled determination of the stringent precautionary measures such as maintaining social distancing, following medically instructed quarantine process and embracing hygiene and sanitation (Khachfe, Chahrour, Sammouri, Salhab, Makki & Fares, 2020).

The educational system was completely short-down and this has negatively affected the completion of academic curricula in all schools. In order to ensure full attention to academic curricula, majority of schools all over the world, adopted the use of electronic teaching and learning. It can therefore be confirmed that the world all over completely depended on ICT during the COVID-19 pandemic. This is also evident with the increase in number of online classes, conferences, meetings etc.

As the lock down continues, government institutions engaged students in online learning of different modes. With the obvious impact of the novel corona virus on schools, which led to school closures, the world over, there was an urgent need for remote learning across all institutions of learning; primary, secondary and higher education institutions. Many schools have resorted to using platforms, such as WhatsApp, Telegram, Zoom, Go-to-Meeting, LMS and others, for instructional delivery. Learning Management System (LMS) is another reliable platform for online teaching and learning in schools, Pius (2020).

Conceptual model

Source: Author's 2020

Online Teaching and Learning

Over the years, there have been various definitions of Online Learning or how On-line Learning is conducted effectively as it always focuses on the specific needs of an individual or an organization. As the COVID-19 pandemic spreads, there was an increasing move towards teaching online because of shutting down of schools, colleges and universities for an indefinite time as the only option left (Martinez, 2020).

On-line or E-learning has been found to be an important tool for effectively continuing the teaching and learning process during the lock-down. The Internet has become one of the pertinent media of learning that gives room for people around the world to access education easily. (Nonn-UI-amin, 2013). Otuka (2010) in Babalola (2018) sees e-learning as all forms of electronically supported learning and teaching which are procedural in character and aimed at effecting the infusion of knowledge to the learner.

Lederman (2020) justly stated that due to the COVID-19 crisis teachers and students both found themselves in the situation where they felt compelled to embrace the digital academic experience as the summum bonum of the online teaching and learning process.

An Online Learning Platform is also seen as an integrated set of interactive online services that provide trainers, learners, and others involved in education with information, tools and resources to support and enhance education delivery and management. It is a term to describe an emerging approach to learn at students' own premise through advanced information-communication technologies. Online learning is an option for learners who wish to learn in their own environment using technology and/or



the Internet. It is a form of learning conducted via a computer network, using the internet and the World Wide Web, a local area network (LAN), or an intranet. Online learning can comprise of any learning experience or environment that relies upon the Internet/WWW as the primary delivery mode of communication and presentation. There are various forms of E-learning platform, among which are: Google Classrooms Blackboard Learning, Shift, Articulate, Elucidate, Adobe Captive, Learning Management System. On-line Learning has completely transformed the way in which learning is imparted to students. Unlike traditional chalk and board method of teaching, Online Learning makes learning simpler, easier, and more effective. As the COVID-19 pandemic spreads, there has been an increasing move towards teaching online because of shutting down of schools, colleges and universities for an indefinite time as the only option left (Martinez, 2020).

During the COVID-19 crisis, online education became a pedagogical shift from traditional method to the modern approach of teaching-learning from classroom to Zoom, from personal to virtual and from seminars to webinars. Previously, e-learning, distance education and correspondence courses were popularly considered as the part of non-formal education, but as of now, it seems that it would gradually replace the formal education system if the circumstances enduringly persist over the time.

As of today's scene, it is quite impossible to take classes in regular mode amid the COVID-19 outbreak in which to maintain the social distancing is of paramount importance; hence undoubtedly online teaching mode became a necessity that brought an organization and individual both in an unfreeze phase.

The Internet has made online learning possible, and many researchers and educators are interested in online learning to enhance and improve student learning outcomes while combating the reduction in resources, particularly in higher education. It is imperative that researchers and educators consider the effectiveness of online learning compared to traditional face-to-face format and the factors that influence the effectiveness of online courses.

While increasing numbers of college instructors seem to be embracing the format (Roehl, Reddy & Shannon, 2013), others question the potential impact on the quality of educational programs, citing limitations in depth of content and student engagement. Gilboy, Heinerichs, and Pazzaglia (2015) define student engagement as learners constructing or reconstructing knowledge through the use of active learning strategies, such as problem-based learning, simulation, and collaborative discussion.

Hypotheses

The following hypothesis were formulated for this study:

- H01:** Adequacy of Virtual Learning Centers does not significantly enhance online teaching and learning in Ogun State tertiary institutions
- H02:** Availability of internet and intranet services does not significantly enhance online teaching and learning in Ogun State tertiary institutions
- H03:** Conduciveness of learning environment does not have a positive effect on online teaching and learning in Ogun State tertiary institutions

Methodology

The research is a descriptive survey. Data was obtained from both primary (survey of students) and secondary sources (published state of tertiary institutions in Nigeria). A multistage sampling (purposive, stratified and random) was used to sample a quota of 300 higher level students from 300 level and beyond in 3 selected public tertiary institutions in Ogun State- Olabisi Onabanjo University, Tai Solarin University of Education and Moshood Abiola Polytechnic as well as workforce of ICT unit of the selected institutions. The technique began with a purposive selection of three tertiary institutions in Ogun State and later with stratification of students by areas of academic pursuits and random sampling of respondents. Questionnaire was used as the main research instrument for obtaining primary data while secondary data was obtained from www.nigeriatertiarysurvey.org. Three hypotheses were also formulated for the study. The analytical tool was regression model. The questionnaire was titled "Questionnaire on effectiveness of online Teaching and Learning – Post Covid'19 in Ogun state Public Tertiary Institutions". 5 points Likert Scale was used in the rating.

Analysis and Discussion of Results

Table 4.1: Sample/Stratification of population

	OOU	TASUED	MAPOLY
Estimated population of 300L students and beyond	≤4300	≤3000	≤3000
Estimated sample of 300L students and beyond by stratification	125	88	87
Total sample			300

Source: Author's survey, 2020

Table 4.1 shows the sample obtained from each of the selected institutions to proportion of the population. Samples of 125, 88 and 87 were obtained from Olabisi Onabanjo University, Tai Solarin University of Education and Moshood Abiola Polytechnic respectively. This made a total sample of 300 respondents.

Table 2: Statistics of effective-teaching parameters to number of undergraduates in selected institutions in Ogun State

	OOU	TASUED	MAPOLY
Virtual Learning Centres (VLCs) capacity	1716	936	900
Internet and intranet services coverage	< 12 rooms	< 5 rooms	< 5 rooms
Conduciveness of learning environment	= Average	< Average	< Average
Management commitment	> Average	> Average	> Average
300L students and beyond	≤4300	≤3100	≤3000
Ratio to facility to students	4: 1	3: 1	3:1

Source: www.nigeriatertiarysurvey.org, 2021.

Table 4.2 presents analysis of effective-teaching parameters to number of undergraduates in selected institutions in Ogun State. The parameters include VLC capacity, Internet and intranet services coverage, Conduciveness of learning environment and Management commitment. OOU, TASUED and MAPOLY have 1716, 936 and 900 functional VLC capacity respectively as obtained from the Nigeria Tertiary Survey (2021).

Second, the internet and intranet services coverage can only be accessed by less than 12, 5 and 5 in OOU, TASUED and MAPOLY respectively.

Third, conduciveness of learning environment is found to be at average at OOU but below average at TASUED and MAPOLY.

Fourth, management commitment is found to be above average in the selected institutions. Finally, ratio of students to available facilities is higher than normal in all the selected institutions. As shown in Table 4.2, it is 4:1, 3:1 and 3:1 at OOU, TASUED and MAPOLY respectively.

Table 4.3: Measure for effective learning

Authentic learning	Number	Percentage
SA	93	31%
A	6	2%
U	3	1%
D	109	36%
SD	89	29%
Mental model	Number	Percentage
SA	89	29%
A	10	3%
U	3	1%
D	102	34%

SD	96	32%
Internal Motivation	Number	Percentage
SA	90	30%
A	6	2%
U	6	2%
D	90	30%
SD	108	36%
Total	300	100%

Source: Author's survey, 2020

Table 4.3 presents data for measures of effective learning and it specifically looks into 3 measures- authentic learning, mental model and internal motivation.

Majority of the respondents which represented 36% disagreed that they enjoy authentic learning in the system and so they could not the real world problem but rather an abstract. Majority of the respondents which also represented 34% disagreed that they enjoy virtual and physical mode to refine understanding. Majority of the respondents which also represented 36% strongly disagreed that they enjoy positive emotional connection.

Model Summary

Multiple Regression Results

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.183(a)	.392	.261		.566

(a) Predictors: (Constant), Existing ICT structure –VLCs, internet services, learning environment

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.200	1.936		2.685	.005
	Existing ICT structure	.600	.548	.361	1.095	.005

(b) Dependent Variable: Effective online teaching/learning- Authentic learning, mental model, internal motivation

ANOVA (b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31.879	1	3.900	5.140	.001(a)
	Residual	6.000	318	.758		
	Total	6.900	319			

(a) Predictors: (Constant), Existing ICT structure –VLCs, internet services, learning environment

(b) Dependent Variable: Effective online teaching/learning

The above statistical computations show that the R-squared value is 0.392. This implied that Existing ICT structure does not have a direct influence on effective online teaching/learning. It can however be inferred that existing ICT structure accounted for 39% of effectiveness of the online teaching/learning while 61% can be accounted for by factors outside the model. The R-squared value obtained is also in agreement with the F-statistic and t-statistic obtained in a and b above which show a good representation of its data. The residual value above has also helped to overcome the problem of autocorrelation. It can therefore be concluded that existing ICT structure have no direct influence on effectiveness of online teaching/learning by the rejection of the null hypothesis subject to the decision rule.

Conclusion

It was found that all the investigated effective-teaching parameters are statistically significant to measure teaching effectiveness at 5%. However, the parameters (availability of Virtual Learning Centres (VLCs), internet and intranet services, conduciveness of learning environment and management commitment to measure the effectiveness of online teaching) are found to be inadequate to guarantee effective online teaching and learning among public tertiary institutions in Ogun State- Post Covid-19. Despite the availability, accessibility and timeless nature of On-line Teaching and Learning platforms, the pace at which online platforms were being utilized for e-learning in Nigerian schools is very low or that most schools do not utilize online platforms for e-learning at all. Without the means of E-learning platforms, education would have come to a sudden halt since the outbreak of the corona virus. Though there are challenges related to e-learning as highlighted above, it has actually emerged as a benefit to learners and educators around the world. The global COVID'19 pandemic has manifested the huge importance of online teaching/learning in today's modern world. Globally there has been a huge and sudden change in the field of academia with the spread of the deadly COVID-19 virus. There has been a global transition to online methods of teaching and learning (Basilaia, et al., 2020). The conventional Classroom atmosphere has been replaced by digital means to stop the spread of the virus and to ensure safety of the educators and learners.

Recommendations

Based on the research findings, the following recommendations were made:

- i. They should provide adequate training for lecturers to acquire requisite skills to effectively facilitate online delivery of learning content.
- ii. They should provide adequate orientation, motivation and training for students to acquire relevant skills to maximally benefit from online teaching and learning. They should be exposed to modern information technology applications to support their learning.
- iii. Parents should also try to provide an enabling environment for students at home. They should try as much as possible to provide support ranging from making available the necessary electronic gadgets (such as laptops and android phones),

- access to electricity power supply (generating sets and solar panels) and sufficient data for strong and consistent internet connection.
- iv. Parents should also provide an emotionally enabling environment so that students can benefit from the face-to-screen online teaching and learning. These would help the students to benefit maximally from online schooling.

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PROSPECTS AND CHALLENGES OF ADOPTING VIRTUAL TEACHING AND LEARNING FOR BUSINESS EDUCATION COURSES IN POST COVID-19 ERA

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Abstract

This study examined the prospects and challenges of adopting virtual teaching and learning for business education courses. The study adopted the descriptive survey research design while the population of the study consisted of all 45 business education lecturers and 580 third year business education undergraduate students registered for the 2019/2020 academic sessions in four public tertiary institutions offering business teacher education in Ogun state, Nigeria. The study sample comprised 40 lecturers and 175 students who were selected based on the stratified random sampling technique. A structured questionnaire was used as instrument for data collection. The data gathered were analyzed using frequency count, mean, standard deviation and t-test statistics. Findings revealed that virtual teaching and learning offer unlimited access to knowledge as well as safe and secure environment among others. It was equally revealed that human resistance to change, erratic power supply and poor information network are some of the challenges of adopting virtual teaching and learning for business education courses. Finally, it was recommended that institutions should design and establish a pragmatic and workable framework for virtual teaching and learning for business education courses.

Keywords: Virtual classroom, Online education, Information and Communication Technology (ICT), Internet.

Introduction

Without controversy the COVID 19 pandemic has ushered in a new era in human existence. It is not an exaggeration to say that virtually every aspect of human existence has been affected by the ravaging pandemic. Resultantly, stakeholders in every sector of human society have been forced to alter their modus operandi and devise new methods of getting things done. One of the most critical sectors of the human society that was globally affected by the pandemic is the education sector. This is because the pandemic brought in its' wake restriction on human gathering, physical lockdown and school closure. As things

stand presently, the impact of the pandemic is not yet over as the universe continues to grapple with the successive and emerging waves of the dreaded pandemic. In a nutshell, the human race has reluctantly accepted that the pandemic will not disappear so soon, it is therefore imperative that stakeholders in education in general and business education in particular think out of the box to redesign the teaching and learning process for business education courses. One of the pragmatic strategies to adopt in order to conquer the menace of the COVID-19 pandemic is virtual teaching which is a method of instruction carried out entirely online.

Virtual teaching also occurs when elements of face-to-face courses are taught online through learning management systems and other educational tools and platforms. Virtual teaching also includes digitally transmitting course materials to students. According to Racheva (2017) virtual learning refers to educational experience that is boosted through the utilization of computers and/or the internet both within and without the confinement of the educational institution. In like manner, Nwabufo and Nnaji (2021) described virtual teaching and learning as the process of utilizing gadgets such computer system, internet, zoom and other technological tools/applications in the teaching and learning process. Teaching and learning activities are undertaken online whereby the teacher and learners are physically separated (in terms of place, time or both). It is conducted in a virtual learning environment with electronic study content designed for self-paced (asynchronous) or live web-conferencing (synchronous) online teaching and lesson delivery (Arkorful & Abaidoo, 2014). Basically, virtual teaching and learning have many forms and related terms that seem very familiar but connote varying aspects of teaching and learning. The most commonly used terms are: e-learning, web-based learning, online teaching and learning, distance learning, blended learning, google class and so on. It is noteworthy that virtual teaching and learning combine all of the aforementioned terms.

Business Education has been described in different ways by different scholars but basically business education can be described as an educational process or content which prepares an individual for roles in enterprise such as employees, entrepreneurs and employers or self-employed. Business education also prepares recipients to become teachers of business subjects and courses. (Oduma, 2020). Without any doubt, there are great prospects for the adoption of virtual teaching and learning for business education courses. According to Olugbenga and Qiu (2020) virtual teaching and learning have the ability to eliminate the barriers of physical or geographical limitations, improve virtual communication and collaboration among tutors and learners, while also catering for individual differences.

Furthermore, virtual teaching and learning have the prospects of granting remote access to an unlimited array of educational services (topics & tutors) offered globally, there is also the prospect of an individualized learning process that takes into cognizance the personal level of competence, individual needs and diversities of learning styles. Virtual teaching and learning also help to create a safe and secure learning environment regardless of time, location and space. Virtual teaching and learning can be cost-effective, time-effective and easily scalable (Racheva, 2017).

In a study on the prospects and challenges of online education in secondary schools in Northern Nigeria, Olugbenga and Qiu (2020) adopted the survey research design method and the simple random sampling technique to select the respondents who were 553 students drawn from grade “A” private schools in ten different states in Northern Nigeria. Ten students from each state got copies of the questionnaire via email through their school principals. Data were analyzed using simple percentage. Findings of the study revealed that irregular power supply, inadequate internal bandwidth or coverage, diversion of attention and unwillingness to adapt to emerging reality/technologies are some of the challenges militating against the adoption of virtual teaching and learning for secondary school students.

Similarly Ademiluyi and Ishola (2021) conducted a study to examine inhibitors to deployment and utilization of e-learning facilities for teaching and learning business studies in junior secondary schools in Ogbomoso, Oyo state, Nigeria. The study adopted descriptive survey research design while three research questions guided the study. Simple random sampling technique was used to select fourteen public junior secondary schools in Ogbomoso while purposive sampling technique was used to select thirty business studies teachers. Checklist on electronic learning facilities for teaching and learning business studies (CELFTLBS) and questionnaire on inhibitions to deployment of electronic learning facilities (QIDELF) were used as instruments for data collection. The instruments were validated by three experts in the Department of Business and Entrepreneurship Education, Kwara State University, Malete, Nigeria. A pilot study was conducted at the Federal Government Girls College, Oyo involving eight business studies teachers. Data collected from the pilot study were analyzed using the Cronbach Alpha method which yielded an internal reliability coefficient of 0.77. The research instruments were administered personally on the respondents and there was 100% retrieval. The data gathered were analyzed using simple percentage, frequency count and mean rating. Findings of the study revealed that poor funding, acute shortage of skilled personnel and ignorance are some of the challenges impeding the deployment and utilization of electronic learning facilities in junior secondary schools in Ogbomoso, Oyo state, Nigeria. Findings also indicated that electronic learning for teaching and learning business studies in secondary schools were inadequate and the few facilities available were not accessible to teachers and students for teaching and learning.

Alhat (2020) asserted that there is a high possibility of the virtual classroom becoming the future of education post COVID-19. This is because the lethal corona virus has changed the entire universe as people are getting scared of venturing out of their homes. The study observed that irrespective of category, scholars are unanimous that virtual classroom (VC) has advantages and disadvantages and that virtual classroom could be the future of educational institutions. A technology usually takes decades to become a daily phenomenon. Virtual classrooms are taking baby steps today but after a decade or more they might replace the traditional classroom. From the foregoing, it is obvious that virtual teaching and learning have great prospects in the field of education in the post COVID-19 era though the adoption is fraught with multidimensional challenges in the Nigerian education system, it is on this premise that the researchers decided to examine the prospects

and challenges of adopting virtual teaching and learning for business education courses in selected public tertiary institutions in Ogun State, Nigeria.

Statement of the problem

It is not an overstatement that COVID-19 has exposed the fragile nature of most human institutions and establishments. The fallout of the pandemic resulted in lockdown, crowd restrictions and school closure. According to Na'Allah (2021), universally the education sector had never experienced such disruption on a monumental scale before because COVID-19 posed grievous consequences for learners by depriving them of their rights to education and exposing them to a myriad of societal ills. As affirmed by the United Nations Educational Scientific and Cultural Organization (UNESCO)(2020), about 1.6 billion (representing 87% of the global student population) were kept at home, about 62 million teachers equally remained idle at home globally while academic activities of about 40 million Nigerian learners were negatively affected due to prolonged interruption in the school calendar. The continuous threat of the pandemic has resulted in a critical appraisal of the traditional method of teaching. It is therefore incumbent on every stakeholder in the education sector to be proactive in designing templates that can mitigate the negative effect of the pandemic. One of the tools to be adopted is virtual teaching and learning. With this method of schooling, academic calendar will not become bastardized while the school process will not fall into coma.

However Na'Allah (2021) asserted that the level of digital learning in Nigeria is still at the low ebb due to the resistance to change from traditional pedagogical methods to more innovative, technology-based teaching and learning methods in the educational system. It therefore becomes imperative to ask the following pertinent questions: How functional is the virtual teaching and learning method in Nigeria's educational system and how prepared is the Nigerian education system for the adoption of virtual teaching and learning?

Purpose of the study

The main purpose of this study was to examine the prospects and challenges of adopting virtual teaching and learning for business education courses in selected public tertiary institutions in Ogun State, Nigeria. Specifically the study sought to:

1. Assess the prospects of adopting virtual teaching and learning for business education courses.
2. Determine the challenges of adopting virtual teaching and learning for business education courses.

Research questions

The following research questions were raised:

1. What are the prospects of adopting virtual teaching and learning for business education courses?
2. What are the challenges of adopting virtual teaching and learning for business education courses?

Research hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance.

- Ho1: There is no significant difference in the mean responses of business education lecturers and students concerning the prospects of adopting virtual teaching and learning.
- Ho2: There is no significant difference in the mean responses of business education lecturers and students concerning the challenges of adopting virtual teaching and learning.

Methods

The study adopted the descriptive survey research design while the population of the study consisted of 45 business education lecturers and 580 third year undergraduate students from the following public tertiary institutions that offer business teacher education programme in Ogun State. These are: Olabisi Onabanjo University (OOU), Ago-Iwoye, Tai Solarin University of Education (TASUED), Ijebu-Ode, Federal College of Education, Abeokuta and Tai Solarin College of Education, Omu-Ijebu.

40 lecturers and 175 students were selected as sample for the study using the stratified random sampling technique. A structured questionnaire tagged “Prospects and Challenges of Virtual Teaching and Learning Questionnaire (PCVTLQ)” was used as instrument for data collection. The instrument was validated by three business educators drawn from the Federal College of Education (Technical) Akoka, Lagos. A pilot study was conducted at the Department of Business Education, Federal College of Education (Special) Oyo involving 10 lecturers and 30 students. The data collected from the pilot study were analyzed using the Cronbach Alpha Method which yielded a reliability coefficient of 0.78. Copies of the questionnaire were administered on the respondents via emails and WhatsApp while the data collected were analyzed using descriptive and inferential statistics. The research questions were answered using frequency tables, mean and standard deviation while the null hypotheses were tested at 0.05 level of significance using the t-test statistics.

Results

Research Question One: *What are the prospects of adopting virtual teaching and learning for business education courses?*

Table 1: Mean responses on the prospects of adopting virtual teaching and learning for business education courses.

S/N	Prospects	Mean	SD	Decision
1.	Unlimited access to educational materials	3.14	0.63	Agree
2.	Safe and secure learning environment	3.30	0.64	Agree
3.	Materials are easily updated and learners see the changes immediately	3.28	0.67	Agree
4.	Cost-effectiveness and time-effectiveness	3.11	0.53	Agree
5.	Virtual teaching and learning are becoming more popular and acceptable among Nigerians	3.22	0.61	Agree
6.	Practical classes can be taught in virtual classroom	3.49	0.67	Agree
7.	Virtual classes can serve as reliable substitutes to normal traditional classrooms during lockdown or restriction Virtual teaching and learning can be used to prepare	3.45	0.58	Agree
8.	business education students for the world of work through the use of webinar, mock tests, videos and counseling	3.39	0.60	Agree
9.	There is flexibility in virtual teaching and learning in terms of time, location and pace Virtual teaching and learning are veritable tools to tackle	3.36	0.62	Agree
10.	the menace of shortage of competent lecturers and facilities	3.00	0.74	Agree

N = 215; Decision rule = 2.50; Weighted mean = 3.27; SD = 0.63, Agree

Findings from table 1 revealed that respondents agree that all the items are prospects of adopting virtual teaching and learning for business education courses.

Research Question Two: *What are the challenges of adopting virtual teaching and learning for business education courses?*

Table 2: Mean responses on the challenges of adopting virtual teaching and learning for business education courses.

S/N	Challenges	Mean	SD	Decision
1.	Human resistance to change	3.25	0.66	Agree
2.	Low level of adaptability by lecturers and students	3.39	0.82	Agree
3.	Poor network and technical issues	3.40	0.75	Agree
4.	Erratic power supply	3.28	0.56	Agree
5.	High cost of acquiring virtual teaching and learning gadgets	3.39	0.76	Agree
6.	Insufficient ICT knowledge and skills by lecturers and students	3.45	0.50	Agree
7.	Possibility of the students diverting attention to other sites or events	3.46	0.67	Agree
8.	Poor ICT policy regulation	3.22	0.71	Agree
9.	Dearth of skilled technicians to develop appropriate software	3.19	0.78	Agree
10.	High cost of data/airtime	3.58	0.68	Agree

N = 215; Decision rule = 2.50; Weighted mean = 3.36; SD = 0.69, Agree

Results in Table 2 indicated that respondents agreed that all the items are challenges of adopting virtual teaching and learning for business education courses.

Test of hypotheses

Ho1: *“There is no significant difference in the mean responses of business education lecturers and students concerning the prospects of virtual teaching and learning”*

Table 3: Summary of t-test analysis of the difference in the mean responses of business education lecturers and students concerning the prospects of adopting virtual teaching and learning

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Lecturers	40	3.39	0.31	0.753	213	0.336	NS
Students	175	3.25	0.58				

Results in table 3 implied that there was no significant difference in the mean responses of business education lecturers and students concerning the prospects of adopting virtual teaching and learning since $t\text{-cal} = 0.753$, $P > 0.05$). Thus, the null hypothesis was upheld.

Ho2: *“There is no significant difference in the mean responses of business education lecturers and students concerning the challenges of adopting virtual teaching and learning for business education courses”*

Table 4: Summary of t-test analysis of the difference in the mean responses of business education lecturers and students concerning the challenges of adopting virtual teaching and learning.

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Lecturers	40	3.48	0.37	1.472	213	0.285	NS
Students	175	3.39	0.48				

Findings in table 4 indicated that there was no significant difference in the mean responses of business education lecturers and students concerning the challenges of adopting virtual teaching and learning for business education courses since $t\text{-cal} = 1.472$, $p > 0.05$). Therefore, the null hypothesis was accepted.

Discussion of findings

Table 1 revealed some prospects of adopting virtual teaching and learning to include, unlimited access to educational materials, flexibility, safe and secure learning environment among others. This finding supported the assertion of Racheva (2017) that virtual teaching and learning help to eliminate barriers and caters for individual differences among learners. The finding also supported the opinion of Nwabufu and Nnaji (2021) that a virtual classroom enables students to access quality education anywhere on the planet so

long as there is a reliable network connection. Virtual education is gaining wider acceptance globally because of its' inherent prospects.

In Table 2, it was revealed that resistance to change, poor network and technical issues are some of the challenges of adopting virtual teaching and learning for business courses. This finding corroborated the findings of Akorful and Abaidoo (2014) that effective e-learning in tertiary institutions is hindered by multiple challenges. The finding also corroborated the views of Na'Allah (2021) that digital education in Nigeria is hampered by inadequate ICT infrastructure, poor and limited expertise, underfunding and overdependence of educational institutions on government. In a nutshell the challenges of adopting virtual teaching and learning in Nigerian schools are daunting but surmountable.

Furthermore, Table 3 indicated that there was no significant difference in the mean responses of business education lecturers and students concerning the prospects of adopting virtual teaching and learning for business education courses. This finding buttressed the finding of Olugbenga and Qiu (2020) that teachers and students did not differ significantly in their perception of the prospects and challenges of online education in secondary schools in Northern Nigeria.

Lastly, Table 4 showed that there was no significant difference in the mean responses of lecturers and students concerning the challenges of adopting virtual teaching and learning for business education courses. This finding supported the observation of Alhat (2020) that scholars irrespective of status did not differ in their opinion of the challenges of virtual classroom. The finding also buttressed the findings of Ademiluyi and Ishola (2021) that electronic facilities for teaching and learning business studies in secondary schools were inadequate and the few facilities available were accessible by teachers and students for teaching and learning business studies.

Conclusion

Based on the findings of this study, it was concluded that the prospects of virtual teaching and learning include: Unlimited access to education, safe and secure learning environment, cost-effectiveness and time-effectiveness, flexibility in learning in terms of time, location and place, preparation of business education students for the world of work among others. Challenges of adopting virtual teaching and learning include; Human resistance to change, high cost of data/airtime, poor ICT policy regulation, erratic supply of electricity, dearth of skilled technicians to develop appropriate software among others. It was also concluded there was no significant difference in the mean responses of business education lecturers and students concerning the prospects and challenges of adopting virtual teaching and learning for business education courses.

It is obvious that virtual education is gaining wider acceptance globally and Nigeria cannot be left behind. The COVID-19 pandemic does not show any sign of disappearing soon. The implication of this is that if business educators refuse to embrace virtual teaching and learning, COVID-19 restrictions and other unforeseen emergencies will continue to impede effective teaching and learning of business education courses.



Recommendations

Based on the conclusion of this study, it was recommended that:

1. Virtual courses that will be internet-based should be introduced in tertiary institutions and there should be regular in-service training programmes for business education lecturers on the use of virtual classroom gadgets because virtual education is gaining wider acceptance globally due to its' enormous prospects and business educators cannot afford to be left behind.
2. Business education lecturers should make every effort to produce software packages for their course contents and materials while business education students should be encouraged to acquire internet enabled devices so that they can participate actively in virtual classroom. This will help to neutralize some of the challenges affecting the effective adoption of virtual teaching and learning for business education courses.

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PERCEIVED INFLUENCE OF SOCIAL MEDIA ON TEACHING AND LEARNING OF BUSINESS EDUCATION COURSES IN TERTIARY INSTITUTIONS IN POST COVID-19 ERA

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Abstract

The study examined perceived influence of social media on teaching and learning of business education courses in post COVID-19 era. The study was conducted in tertiary institutions in Osun State, Nigeria. Temewo research questions and two null hypotheses guided the study. The study adopted descriptive survey design. The population of the study comprised 48 lecturers and 252 students of Office Technology and Management and Business Education Departments in the four tertiary institutions in Osun State participated in the study. No sample was drawn, the entire population was studied, since the population was of manageable size. A 20- item structured questionnaire was used to gather data from the respondents. The instrument was validated by three experts in business education and entrepreneurship education. Cronbach Alpha method was used to established the reliability coefficient of 0.89. Mean and standard deviation were used to analyze the data collected while the null hypotheses were tested at 0.05 level of significant using independent sample t-test. Findings of the study revealed that social media has positively influenced the teaching and learning of business education courses in post COVID 19 era. The study concluded that Whatsapp and Skpe were indispensable in enhancing teaching and learning of business education courses in tertiary institutions and departmental administrators should organize seminars and workshops for both lecturers and students of OTM and Business Education departments on how effective utilize various social media platforms for academic purposes, in order to improve their academic performances.

Keywords: Business Education Courses, OTM, Social Media, Teaching & Learning and Post COVID-19 Era.

Introduction

Social media has emerged to be one of the most vital communication instruments in the world today generally and particularly in post COVID-19 era. It was designed to ease communication among people, making it easy for people to easily share information,

files, pictures and videos, create blogs and send messages, and conduct real-time conversations. These systems are referred to as social, simply because they allow communication with friends, course mates teachers, project supervisors and lecturers among others so easily and effectively.

. There are different social media sites which focusing on creating networks or social relationship. These sites enable any different kinds of information sharing activities such as sharing interest, business information and current issues. Social media can be defined as a group of internet based applications built on the ideological foundation of web 2.0 which allows the creation and exchange of user generated content (Kaplan & Haelei, 2010).

Social media allows individuals in communities to share ideas, interest, and also meet people with similar ideas and interests. Social media provides new opportunities for innovating, modernizing education and training and preparing learners for the 21st century (Lazarsfeld & Katz, 2015). Furthermore, social media technologies have the potential to support and enhance teaching and learning in higher institutions by providing learners with a chance to manipulate their learning environment and to participate actively in the learning process (Bolter & Grusin, 2014). It is through these collaborative technologies that students and lecturers can benefit from insight in the knowledge at their disposal. These tools also enable information workers to locate and connect people with certain expertise across organizations, bringing people, systems and data into alignment faster to respond to challenges and take advantage of competitive opportunities.

In an educational context, Chen and Bryer (2012) states that social media sites provide students with access to more information and experiences than they would get in a closed environment alone. If properly facilitated and framed, such expanded exposures can benefit students' learning by creating more connections across boundaries. The use of social media technology is a means of helping students in preparation for the 'real world', in order to be able to cope with the many challenges.

According to Hamid and Waycott (2011), many current studies suggest that the high use of social media applications as an addition to formal education institutions and for preparing learners for the 21st century was not for personal use, and it has evolved to be used in virtually all domains. From a preliminary point of view, it appears that almost every institution in the world has adopted some form of social media, using it for general outreach, to attract potential students, maintain alumni relations and increase institutional reputation and pride. Idu and Asuquo, (2014) states that the primary reason for adopting social media in the classroom, is because most people are familiar with it and also academic experts arguably perceive that social media can be used as an effective teaching and learning tool in higher education because of its ease of use, versatility in aiding easy access

to learning materials and reduction in costs of moving about from one place to another before teaching and learning can take place particularly in post COVID -19 era.

This is supported by Okoro (2013) who submits that for several years, social media have facilitated teaching and learning and has also increased the level of students' enthusiasm in learning activities which includes business education. It is evident that the concept of social media as a tool for teaching and learning is considered to be very attractive, as a new learning model whose effect may be a salutary to the development of education in a developing country like Nigeria. This approach to teaching/learning through the use of a variety of methods shifts the role of the instructors from giver of information to a facilitator of learning. Social media is giving learning across the multiple context through social media site and content interactions using personal electronic devices (Crompton, 2013). Social media users use social media sites for educational purposes when and where it is convenient for them. Social media sites include WhatsApp, Twitter, Skype, Facebook and many others that are enabled by portable technologies. In this case, using social media site as a tool for creating learning aids and materials becomes an important part of informal learning (Adebayo 2014).

Social media sites can therefore have influence on how educators teach and how learners learn. Social media site allow learners and teachers to have access to information anywhere they are and at any time of the day (Bere, 2013). According to Baran, (2014) expediency, convenience and immediacy have great value to teachers and improve students' learning. With the use of social media collaborative and individualized learning could be achieved (Cheon, Lee, Crooks & Song, 2012). Hannah and Joshua (2017) sought to determine whether or not social media sites are useful in the classroom and adds value to students learning. The researchers noted that students have greater positive change in their learning using social media sites. Also, students with opportunities of using social media sites for learning were more confident in their learning activities. Students using social media sites had positive change in their interest and willingness to learn as compared to paper learners. The use of social media sites give chance to individualized, collaborative and informal learning without being limited to classroom environment or vicinity.

Business education is a discipline that trains its recipients to be self reliant and employable. It is an aspect of learning that prepares individuals for roles in business and offers them knowledge about business (Nwafor, 2014). According to Ezenwafor (2012), business education is a programme of instruction that consists of general business education-a programme, which provides the recipients with competencies and skills needed in managing personal business affairs and using the services of the business world. Oyedele and Oladeji (2016) states that business education is a programme which involves the acquisition of skills, ideas and management abilities necessary for job performance.

Individuals who receive training in business education can easily develop potentials for entrepreneurship pursuits especially in the era of economic melt down and unemployment. On the same vain, OTM is an aspect of business education which was formerly known as Secretarial studies, OTM enable students to acquire skills in keyboarding, Shorthand and ICT.

Statement of Problem

The advent of social media has created new opportunities and challenges for teachers and learners alike. Social media has become the driving force in the expansion of distance learning. WhatsApp and Skype, have become common place in all areas of the world with great impact on all activities. In the field of education and business education in particular, social media is rapidly becoming the instrument of choice of communication between the teachers and the students, and for instructions among students themselves. Class-work, assignments, lecture materials among others are frequently posted on social media and often engender extensive creative interactions among the participants (Mamman & Oladeji, 2018). Some business educators have experimented with online delivery of a good portion of their lecture materials, using the social media with uncertain results on learning outcomes.

However, the extent to which students employ social media for educational purpose is unknown. Most times, students constantly hook to the social media and it appears that much of their time is spent on irrelevant social activities. It has also been observed that many students actually spend valuable lecture time chatting or watching video on social media in the classroom while the teacher is teaching, to the detriment of academic activities. It is therefore uncertain whether social media have salutary or negative influence on the academic activities of business education students in Osun State Tertiary Institutions. Arguably, social media if properly managed, can have significant influence on teaching and learning in business education. Indeed, with new social media being developed and introduced, the influence of social media is likely to grow.

It has been observed by the researcher that none of the previous studies combined the variables of this study as presented; this provides a gap to be filled. By examining the influence and potentials of social media, this study will determine the type of social media frequently used, the motivation or willingness for social media use and the effect of social media on teaching and learning of business education courses in tertiary institutions.

Purpose of the Study

1. examined the perceived influence of WhatsApp on teaching and learning of business education courses in tertiary institutions.

2. determined the perceived influence of Skype on teaching and learning of business education courses in tertiary institutions.

Research Questions

The following research questions guided the study.

1. What is the perceived influence of WhatsApp on teaching and learning of business education courses in tertiary institutions?
2. What is the perceived influence of Skype on teaching and learning of business education courses in tertiary institutions?

Hypotheses

The following hypotheses were formulated to guide the study:

- H₀₁: There is no significant difference between the mean perception of business education lecturers and students regarding the influence of WhatsApp on the teaching and learning of business education courses in tertiary institutions.
- H₀₂: There is no significant difference between the mean perception of female and male respondents regarding the influence of Skype on the teaching and learning of business education courses in tertiary institutions.

Methods

The study was carried out from public tertiary institutions in Osun State offering Office Technology and Management and Business Education Programmes: Osun State Polytechnic, Iree, Osun State Colleges of Education, Ilesa and Ila Orangun and Federal Polytechnic, Ede respectively. The population of the comprised 48 lecturers and 252 students of the institutions. No sample was drawn as the entire population was studied. Two research questions and two null hypotheses guided the study. A structure questionnaire of 20-items title (PISMTLBECTI) was used to collect data. The questionnaire was divided into two sections. Section A sought the demographic data of the respondents while section B consisted of questions designed to extract information needed. The questionnaire was face content validated by the three experts from the Department of Business and Entrepreneurship Education, Kwara State University, Malete, Kwara State. The reliability of the instrument was obtained. The instrument adopted a modified four point rating scale of : Strongly Agree (SA-4 points) Agree (A-3 points) (Disagree D-2 points) and Strongly Disagree (SD- 1 point).

A total of 300 copies of the questionnaire were distributed by the researcher with the aid of research assistants. Two hundred and ninety copies returned representing 96% (40 from the lecturers and 250 from the students) Mean and standard deviation were used to

analyzed the data collected, while t-test was used to test the null hypotheses at 0.05 level of significance. The decision rule for the research question was that any item with a mean score of 2.50 and above was regarded as agreed while below 2.50 was regarded as disagreed. In the test of hypothesis, if the observed probability value was less than or equal to the fixed significant level of 0.05, the null was rejected, while if the observed significant level was greater than the fixed significant level of 0.05 the null hypothesis was retained.

Results

Research Question 1

Research Question 1: What is the perceived influence of WhatsApp on teaching and learning of business education courses in tertiary institutions?

Table 1: Mean and standard deviation of responses on the perceived influence of WhatsApp on teaching and learning of business education courses

S/N	Item Statements	\bar{X}	SD	Decision
1.	WhatsApp platforms are used by business educators to share online assignments to the students.	3.50	0.59	Strongly Agreed
2.	WhatsApp platforms are used by business educators for receiving instant feedback from the learners.	2.61	0.73	Agreed
3.	WhatsApp improves communication between business educators and their colleagues.	3.47	0.64	Agreed
4.	WhatsApp reduces the distance between teacher and students, thereby reducing students' tension.	2.90	0.74	Agreed
5.	WhatsApp breaks down psychological barriers between the business educators and students.	3.53	0.55	Strongly Agreed
6.	WhatsApp makes learning enjoyable and enhances understanding by business educators and students.	2.76	0.96	Agreed
7.	WhatsApp platform encourages more interaction between the facilitator and the students	3.10	0.87	Agreed
8.	WhatsApp provides variety in instruction and content for teaching and learning of business courses	3.29	0.92	Agreed
9.	WhatsApp platform help to solve the problems caused by the absence of facilitators/lecturers.	3.42	0.64	Agreed
10.	WhatsApp helps the lecturers and students to be accessible no their website.	3.40	0.63	Agreed
Weighted average		3.20	0.73	Agreed

Source: Field Survey, 2021

Table 1 shows a grand calculated weighted average mean and standard deviation of 3.20 and 0.72, which indicates agreement to all constructs. This implies that business educators

and students supported that WhatsApp positively influences the teaching and learning of business education courses in tertiary institutions.

Research Question 2

Research Question 2: What is the perceived influence of Skype on teaching and learning of business education courses in tertiary institutions?

Table 2: Mean and standard deviation of responses on the perceived influence of Skype on teaching and learning of business education courses

S/ N	Item Statements	\bar{X}	SD	Remark
1.	Skype gives business educators the ability to connect with students outside the classroom.	3.34	0.47	Agreed
2.	Skype allows lecturer to meet face-to-face with the subject of their learning	3.47	0.52	Agreed
3.	Skype gives business educators opportunities to expand in learning through voice, text and video	3.74	0.43	Agreed
4.	Skype gives business educators opportunities to connect with each other thereby increased their knowledge in teaching and learning.	3.83	0.37	Agreed
5.	Skype helps business education students to share projects or papers, polish their language skills and exchange information.	3.75	0.43	Agreed
6.	Skype gives business education students and lecturers the opportunities to participate in virtual lectures	3.76	0.42	Agreed
7.	Skype helps instructors to accomplish many learning activities	3.83	0.37	Agreed
8.	Skype enhances collaborative learning and teaching among business educators and students	3.78	0.41	Agreed
9.	Business educators use skype to contact, communicate and share learning and teaching materials with others	3.40	0.49	Agreed
10.	Skype assists business educators learning new cultures and languages in their educational environment	3.39	0.51	Agreed
Weighted average		3.63	0.44	Agreed

Table 2 show a grand calculated weighted average mean and standard deviation of 3.63 and 0.44 which indicated agreement to all the constructs. This implies that business educators and students affirmed that Skype positively influence the teaching and learning of business education courses in tertiary institutions.

Hypothesis 1

H₀₁: There is no significant difference between the mean ratings of business education lecturers and students regarding the influence of WhatsApp on teaching and learning of business education courses in tertiary institutions.

Table 3: T-test of the difference between the mean responses of lecturers and students on the influence of WhatsApp on teaching and learning of business education courses

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Lecturers	40	3.12	0.27	0.605	288	0.546	NS
Students	250	3.09	0.28				

Source: Field survey, 2021

$P > 0.05$

Result in table 3 indicates no significant difference in the mean responses of lecturers and students of public tertiary institutions in Osun State as regards the teaching and learning of business education courses. The result shows a calculated value of 0.605 which is greater than the t-test value of 0.546 with the degree of freedom of 298 and 0.05 level of significance. Thus the null hypothesis was retained.

Hypothesis 2

H₀₂: There is no significant difference between the mean ratings of female and male respondents regarding the influence of Skype usage by business educators on teaching and learning of business education courses in tertiary institutions.

Table 4: T-test of the difference between the mean responses of male and female on the influence of Skype on teaching and learning of business education courses

Group	N	Mean	SD	t-cal	df	p-value	Decision
Male	122	3.62	0.18	0.812	288	0.417	NS
Female	168	3.64	0.19				

Source: Field survey, 2021

$P > 0.05$

Result in table 4 indicates no significant difference in the mean responses of male and female of public tertiary institutions in Osun State as regards teaching and learning of business education courses. The result shows a calculated value of 0.812 which is greater than the t-test value of 0.417 with the degree of freedom of 288 and 0.05 level of significance. Thus the null hypothesis was retained.

Discussion of Findings

The results of the analysis on research question one revealed that business educators in tertiary institutions rated the extent to which WhatsApp positive influence on teaching and learning of business education courses in tertiary institutions in Osun State. The results agreed with the opinion of David (2014) who found out that the response on trainee teachers' perceptions toward using WhatsApp group discussion platform for learning showed that the students' WhatsApp group participation increased their interest in the course because it provided them with easy and round the clock access to the lecturer and course mates. Also, Enang (2014) asserted that WhatsApp provides access to learning resources anywhere, anytime and in various formats has the potentials to enhance deep student learning capacities and it allow students to construct their own knowledge.

The study equally revealed in research question 2, that Skype has positive influence on teaching and learning of business education courses in tertiary institutions. This was supported with Steel (2014) who stated that teacher are using Skype in unique way to fulfill educational goals. In addition, Enang (2014) observed that Skype has a potential impact to open up many options to teachers and students interactions. It has potentially revolutionized the teaching and learning process.

Conclusion

The study identified perceived influence of social media on teaching and learning of business education courses in tertiary institutions in Osun State. It was concluded that social media has positively influenced teaching and learning of business education courses in tertiary institutions. The fact that both lecturers and students of business education are aware of social media and utilize them to influence teaching and learning , implies that graduates of business education and OTM would compete favorably in the highly competitive labour markets where ICT competencies are highly demanded for graduates by employers of labour.

Recommendations

Base on the findings of this study, the following recommendations were made:

1. Institution and departmental administration should organize seminars and workshops for both lecturers and students in business education departments on how to effectively utilize WhatsApp for academic purposes, in order to improve their academic performances. Also, business educators and school management of the institutions should educate the students on the benefits of using social media for teaching and learning of business education courses, this will encourage them to utilize various social media platforms for learning process.
2. Teachers and students should learn how to effectively use Skype as a micro blogging platform to pass fast and precise information for academic purposes. Skype is ideal for passing precise information which the learners can summaries and subsequently build on.

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VIRTUAL TEACHING AND LEARNING OF KEYBOARDING SKILLS IN POST COVID 19 ERA: THE PERCEPTION OF BUSINESS EDUCATORS

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Abstract

The study examined the perceived challenges and effectiveness of teaching and learning of keyboarding skills using virtual approach in the post COVID-19 era. Survey research design was adopted. Population of the study comprised 174 Business Educators from the 11 public Colleges of Education in South West Nigeria out of which 55 were randomly sampled from three public Colleges. A 23-item structured questionnaire was the instrument for data collection based on modified 4-point Likert rating scale. The instrument was face validated by two experts in Business Education. Reliability of instrument was determined by administering it to 10 Business Educators outside the sample of the study. Data collected were analyzed using Cronbach Alpha reliability coefficient which yielded 0.78. The researchers administered the instrument. 55 copies of the questionnaire were distributed out of which 45 were retrieved giving 81.82% rate of return. Mean ratings and t-test were the statistical tools used for data analysis. Mean of 2.50 and above was acceptable for the research questions. Findings of the study revealed that epileptic power supply, lack of access to internet connectivity, among others are challenges facing the effectiveness of virtual teaching/learning of keyboarding skills. When considering efforts of the teacher in enforcing correct fingering position and student's posture, there is the need for face-to-face interaction. The study concludes that virtual teaching/learning of keyboarding skills alone may not be effective for improvement in business education students' academic achievement, hence, the need to combine another strategy of teaching like demonstration. It was recommended among others that lasting solution should be provided to all the challenges threatening the teaching/learning of skill-based courses especially keyboarding. Provision should also be made for modern telecommunication equipment/ICT resources to make virtual teaching/learning of keyboarding skills effective in the post COVID-19 era.

Keywords: Virtual teaching/learning, challenges, effectiveness, keyboarding skills, post COVID-19.

Introduction

There was coronavirus pandemic in 2019 coined COVID 19 which spread across the whole world disrupting all human activities including educational system. This led to closure of schools for several months which affected over 91% of the world's student population (UNESCO, 2020). In order to curb the spread of the COVID 19 pandemic, Federal Ministry of Education in Nigeria closed all schools on 19th March, 2020 (Nlebem, 2020 in TEP Centre, 2021). However, the lock down has generated worries in the heart of all stakeholders bearing in mind the likely impact on students' academic achievement.

Consequently, UNESCO established International Commission on the Futures of Education in 2019 to find possible solutions to the problems at hand so that education, a fundamental and universal human right will not collapse. One of the strategies suggested by the commission was virtual teaching and learning for continuity in education during the pandemic period across all levels.

Arising from the foregoing, Adeoye, Adanikin and Adanikin (2020) report that the pandemic has forced a massive shift away from teaching and learning in traditional settings with physical interactions; this has opened up the importance of online teaching/learning though, it is a major problem for children living in poverty ridden areas across the world. There has been speculations vis-a-vis what the lasting effects will be on education in the post-COVID era. Sands and Shushok (2020) reveal that for some, an immediate retreat to the traditions of physical classroom is required while for others, it is a moment of change.

Virtual learning has been described as e-learning, online learning, or digital learning. It is the delivery of learning through technology and internet (Aljawarneh, 2020). Obododike and Okekeokosisi (2020) view e-learning as electronic method of learning associated with computerization in an interactive interface at the convenience of the learners and lecturers. It is the holistic incorporation of modern telecommunication equipment and ICT resources into the education system.

The benefits derived from virtual learning can never be over emphasized. It provides easy access to information across the globe, enhances efficiency of knowledge delivery; provides solution to insufficient lecture spaces and clash in timetable. It is time and cost effective; affords users the opportunity to participate in class at their comfort zone with basic amenities needed compared to the traditional teaching method (Guragain, 2016). Despite virtual learning benefits, it is still facing a lot of challenges such as poor funding, epileptic power supply, poor internet connectivity, ill equipped laboratory, and lack of acceptability by some students/teachers.

Keyboarding, one of the skill-based courses in business education is the act of producing written words as a printed document using either word processor or computer. It involves drilling and needs constant practice because any discontinuity in teaching and learning of such skill-based courses is tantamount to starting afresh (Odim, Annastashia & Solomon, 2018; Olupayimo, 2015).

Skills are expertness, aptitude and competences appropriate for a particular job. It has to do with expert knowledge/creative reasoning to a level of mastery (Inalegwu, 2016). Keyboarding skills therefore, is the ability to fluently communicate through a computer

keyboard by formulating thoughts, compose sentences and emit them through the fingers without a conscious thought of how the fingers make the words (Willer, 2013).

Statement of the Problem

Discontinuity in education has adverse effects on the students' academic achievement generally, especially on skill acquisition courses like keyboarding which needs constant drilling and practice. In Nigeria, discontinuity in education has been caused several time by incessant strike actions, kidnapping and deadly coronavirus pandemic which ravaged the whole world. In order to curb the insurgency, virtual teaching and learning was introduced for continuity in education system. However, before the pandemic, the way business education students in public Colleges of Education in South West Nigeria manipulates keyboard coupled with their academic achievement in keyboarding in the recent times is worrisome to business educators. This may be as a result of the teaching strategy, limited time allocation, class size, students' interest/attitude to learning. Obi (2018) expresses that teaching strategies are the most prominent among several reasons which impact on students' acquisition of effective skills needed to be professional and active participators in creative building. In other to encourage the students acquire necessary skills in keyboarding, teachers have to prepare them using strategies that would arouse their interest and as well enhance their acquisition of the skills.

In view of various challenges encountered in business education in the use of technology, the questions agitating minds of the present researchers include: will the recurring challenges bedeviling teaching/learning of business education courses not affect the virtual teaching and learning of keyboarding skills on students' academic achievement in Colleges of Education in South West Nigeria? How effective can virtual teaching and learning of keyboarding skills be on students' academic achievement being a practical course? It is against this backdrop that this study intends to examine the business educators' perception of challenges of virtual teaching and learning of keyboarding skills on business education students' academic achievement in public Colleges of Education in South West Nigeria.

Research Questions

The following research questions guided the study:

1. What are the challenges of virtual teaching and learning of keyboarding skills on business education students' academic achievement in South West public Colleges of Education?
2. How effective is virtual teaching and learning of keyboarding skills on business education students' academic achievement in South West public Colleges of Education?

Research Hypotheses

The following null hypotheses, tested at 0.05 level of significance guided the study:

H₀₁: There is no significant difference between the mean ratings of male and female business educators on their perception of challenges of virtual teaching and

learning of keyboarding skills on business education students' academic achievement in South West public Colleges of Education.

H₀₂: There is no significant difference between the mean ratings of male and female business educators on their perception of effectiveness of virtual teaching and learning of keyboarding skills on business education students' academic achievement in South West public Colleges of Education.

Method

Survey research design was adopted. Population of the study comprised 174 Business Educators from 11 public Colleges of Education in South West out of which 55 were randomly sampled from three Colleges viz: Adeyemi College of Education, Ondo (15), College of Education, Ikere, Ekiti (22) and Federal College of Education (Special), Oyo (18). Questionnaire was the instrument for data collection based on modified 4-point Likert rating scale of Strongly Agreed (SA)4, Agreed (A)3, Disagree (D)2 and Strongly Disagree (SD)1 for research question 1. For research question 2, Highly Effective (HE)4, Effective (E)3, Low Effective (LE)2, Not Effective (NE)1. The instrument was face validated by two experts in Business Education. Reliability of the instrument was determined by administering it to 10 business educators in College of Education, Ilesa outside the study sample. Data collected were analyzed using Cronbach Alpha reliability coefficient which yielded 0.78. The instrument was administered by the researchers. 55 questionnaire were distributed and 45 were retrieved given 81.82% rate of return. Mean ratings and t-test were the statistical tools used for data analysis. Mean of 2.50 and above was acceptable for the research questions. For hypotheses, where t-critical was greater than or equal to t-calculated, the null hypothesis was upheld.

Research Question 1

What are the Business Educators' perceived challenges of virtual teaching and learning of keyboarding skills in South West public Colleges of Education?

Table 1. Legend: Mean responses on perceived challenges of virtual teaching/learning of keyboarding skills

S/N	Items	X	SD	Remarks
1.	Epileptic power supply	3.7	0.98	Agreed
2.	Threats to students with special needs	2.5	0.66	Agreed
3.	Lack of access to internet connectivity	3.3	0.85	Agreed
4.	Institutional policies	2.9	0.78	Agreed
5.	Limited training period	2.8	0.60	Agreed
6.	Lack of financial/technical capacity to transit from traditional strategy of teaching to virtual	2.5	0.78	Agreed
7.	Limited infrastructure	2.5	0.72	Agreed
8.	High cost of purchasing data bundle	3.4	0.80	Agreed
9.	High cost of internet services	2.8	0.74	Agreed
10.	Lack of interest on the part of students	2.5	0.60	Agreed
11.	Failure of some business educators to update their knowledge	2.0	0.45	Disagreed
12.	Incapability of teachers to assist learners virtually	2.7	0.60	Agreed
13.	Insufficient computers/other technological equipment	3.0	0.67	Agreed
Grand Mean		2.82	0.71	Agreed

Table 1 shows respondents' agreement to the items on challenges of virtual teaching/learning of keyboarding skills ranging from means score of 2.5 to 3.7. However, respondents disagree with item 11 with mean score of 2.0. This implies that failure of some business educators to update their knowledge was not accepted as challenge.

Research Question 2

How effective is virtual teaching and learning of keyboarding skills on business education students' academic achievement in South West public Colleges of Education?

Table 2. Legend: Mean responses on perception of effectiveness of virtual teaching/learning of keyboarding skills on students' academic achievement.

S/N	Items	X	SD	Remarks
1.	Enforcement of correct fingering position through virtual teaching/learning of keyboarding skills	1.8	0.54	Ineffective
2.	Correction of student's posture in keyboarding classes by the teachers	1.0	0.45	Ineffective
3.	Lack of internet connectivity	1.6	0.50	Ineffective
4.	Assessment of students on practical tasks	1.7	0.43	Ineffective
5.	High cost of data bundle	1.1	0.46	Ineffective
6.	Limited training period	1.4	0.50	Ineffective
7.	Insufficient modern technological equipment	1.9	0.47	Ineffective
8.	Enhancing the efficiency of knowledge through easy access to information across the globe	3.6	0.74	Effective
9.	Reduction of insufficient classrooms as student can easily take the lectures online at their convenience	3.2	0.60	Effective
10.	Assessment of students' speed and accuracy	3.1	1.87	Effective
Grand Mean		2.04	0.66	Ineffective

Table 2 reveals the perception of business educators on ineffectiveness of virtual teaching/learning of keyboarding skills in items 1-7. However, the respondents affirm its effectiveness in items 8-10. This implies that it enhances knowledge through easy access to information across the globe.

Null Hypothesis 1

There is no significant difference between the mean ratings of male and female business educators on their perception of challenges of virtual teaching/learning of keyboarding skills on business education students' academic achievement.

Table 3. Legend: T-test analysis on the mean responses of male/female business educators' perception of challenges of virtual teaching/learning of keyboarding skills on business education students' academic achievement.

Variables	N	X	SD	df	t-cal	t-crit	Remarks
Male	30	3.36	1.49	43	1.34	1.90	NS
Female	15	3.31	1.39				

Data in tables 3 shows that t-calculated is less than t-critical, hence, the null hypothesis is upheld.

Null Hypothesis 2

There is no significant difference between the mean ratings of male and female business educators on their perception of effectiveness of virtual teaching/learning of keyboarding skills on business education students' academic achievement.

Table 4. Legend: T-test analysis on mean responses of male/female business educators' perception of effectiveness of virtual teaching/learning of keyboarding skills on students' academic achievement.

Variables	N	X	SD	Df	t-cal	t-crit	Remarks
Male	30	3.50	0.91	43	1.01	1.96	NS
Female	15	3.43	0.68				

Tables 4 shows that t-calculated is less than t-critical, hence, the null hypothesis is upheld.

Discussion of Findings

The study found that epileptic power supply poses a major threat to virtual teaching/learning of keyboarding skills with mean score of 3.7. It was established that lack of access to internet connectivity, high cost of purchasing data bundle, insufficient computer/other technological equipment, limited training period and lack of interest on the part of students, among others are challenges facing the effectiveness of virtual teaching/learning of keyboarding skills with mean score ranging from 2.5 to 3.4. However, failure of some educators to update their knowledge should not be seen as a challenge since

it does not involve majority of business educators. This is supported by Obododike et al (2020); Olupayimo (2018) that some of the challenges of virtual learning in Nigeria are epileptic power supply, high cost of internet data services, poor internet connectivity, among others.

Findings of the study also reveals that considering efforts of the teacher in enforcing correct fingering position and student's posture, there is the need for face-to-face interaction. However, virtual teaching/learning of keyboarding skills is effective in assessment of students' speed/accuracy, taking large classes and easy access to information across the globe as evident in the responses.

Conclusion

The study concludes that virtual teaching/learning of keyboarding skills alone may not be effective for improvement in business education students' academic achievement, hence, there is the need to combine another strategy of teaching such as demonstration. Efforts should be geared towards providing lasting solution to the challenges of virtual teaching/learning of skill-based courses to allow business education be on the same page with other professions in the world.

Recommendations

The following recommendations are made based on the findings:

1. Lasting solution be provided to all the challenges threatening teaching/learning of skill-based courses especially keyboarding in South West public Colleges of Education.
2. Modern telecommunication equipment/ICT resources be provided to make virtual teaching/ learning of keyboarding skills effective in the post COVID-19 era.

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UTILIZATION OF E-LEARNING TECHNOLOGIES FOR EFFECTIVE INSTRUCTIONAL DELIVERY OF ELECTRICAL/ELECTRONIC COURSES IN POST COVID-19 ERA IN TERTIARY INSTITUTIONS IN RIVERS STATE

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Abstract

The study examines utilization of e-learning technologies for effective instructional delivery of Electrical/Electronic courses in post COVID-19 era in tertiary institutions in Rivers State. Three research questions were answered to guide the study. The study adopted descriptive research survey design. The population of the study was 47 Electrical/Electronic Technology respondents comprises of 11 lecturers and 36 postgraduate students from Rivers State University, Port Harcourt and Ignatius Ajuru University of Education. Due to small population size, the entire population was used for the study and hence there was no sample and sampling technique. The instrument for data collection was a self-structured questionnaire design in a four-point modified rating of agreement which was used for data collection. The instrument was given to three experts for face and content validation. The reliability of the instrument was established using test-retest method and computed with Pearson Product Moment Correlation (PPMC) and a coefficient (γ) of 0.86 was obtained. Data collected were analysed with frequency and percentage for research question 1 while research question 2 and 3 were analysed using mean with standard deviation. The study found that majority of the e-learning platforms identified were not utilized in Electrical/Electronic Technology for effective instructional delivery in tertiary institutions in Rivers State. The study further found that utilization of e-learning technologies for instructional delivery are marred with challenges despite it benefits in teaching and learning of Electrical/Electronic Technology courses in tertiary institutions in Rivers State. Based on the findings of the study, it was recommended that e-learning platforms that are available should be encouraged and used among students and lecturers as it is obtainable in other institutions for academic activities. This would serve as an alternative for face-face teaching and learning processes. The Department/institution should improve their ICT facilities and provide free internet access. This will create an awareness about the potentials and prospects of e-learning in Electrical/Electronic Technology and the school generally.

Keywords: Covid-19, E-Learning, Electrical/Electronic Technology, Instructional Delivery, Technologies and Utilization

Introduction

The existence of man right from creation has been characterized with outbreak of certain diseases that are infectious, pestilence, and other natural/environmental disasters which have caused havoc and disrupted economic, social, political, educational activities of man and other sectors of society's life. According to Ali, Ahmad and Husain (2017), the history of pandemics is not new and dates back to years with effects on huge population across continents of the world and deaths of millions of people. According to Scheidel (2017), pandemic outbreaks have decimated societies, determined outcomes of wars, wiped out entire populations, but have also paved the way for innovations, inventions and evolutions in technology in diverse areas of life including sciences, agriculture, economy, political and educational systems.

The evolutionary trend in technology has brought about rapid transformations in all facets of education, including the admission processes, content development and delivery, mode of instructions and assessment, result computation, student-teacher interactions, research, and staff development programmes. The recent outbreak of Corona virus Disease 2019 (COVID- 19) reechoed the growing influence of technology on education. Many educational institutions across the world relied on the use of technologies to ensure continued education during the Corona virus lockdown. It was reported by Charles, Stephanie, Barb, Torrey and Aaron (2020) that many institutions cancelled all their face-to-face classes, including labs and migrated to e-learning. The effects of school closures due to COVID- 19 were mitigated by educational institutions that had supportive e-learning facilities during the crisis. For instance, several tertiary institutions provided online education and trainings for their students and staff during the COVID-19 lockdown through the use of e-learning technologies (platforms).

According to Olaniyi (2016), e-learning is the process of delivering knowledge through electronic media, such as the internet, extranet, satellite broadcast, audio video tape, interactive TV, CD-ROM, electronic board and e-library. E-learning is education that uses computerised communication systems as an environment for communication, the exchange of information and interaction between students and instructors (Bermejo, 2005). E-learning is learning based on information and communication technologies with pedagogical interaction between students and the content, students and the instructors or among students through the web (González-Videgaray, 2007). E-learning is defined as learning facilitated by the use of digital tools and content that involves some form of interactivity, which may include online interaction between the learner and their teacher or peers (Ministry of Communication and Technology of New Zealand, 2008).

In this study, e-learning technologies is an online teaching and learning approach that utilizes different educational platforms through the use of electronic media and devices such as mobile phones and computers as tools for enhancing communication and interaction between teacher and learner. By this, it means that e-learning technologies makes teaching and learning to occur at a defined and specific time without a specific venue of classroom and at a separation between the teacher and the student. It is the delivery of a learning, training or education program by electronic means. E-learning could also be considered a natural evolution of distance learning, which has always taken

advantage of the latest tools to emerge in the context of technologies for structuring education (Albert, Dimitrios, & Nati, 2012). Some of these e-learning technologies platforms utilized for effective instructional delivery include, Udemy, Skillshare, Pluralsight Skills, LinkedIn Learning, CBT Nuggets, Udacity, Cloud Academy, A Cloud Guru, ITProTV, Khan Academy, Coursera, Lynda, Masterclass, Edx and Iversity among others.

In order to enhance the functionality of Electrical/Electronic Technology courses in instructional delivery, lecturers and students should be exposed to modern technologies through the use of e-learning (electronic learning), especially in this era of post COVID-19 pandemic in the world, Electrical/Electronic Technology lecturers and students have to be skillful in the use of internet and computer facilities. E-learning is one of the vital tools that promote education which has been defined by Kehinde (2017) as the use of electronic educational technology in teaching and learning. This involves the utilization of resources such as information and communication technology (ICT), technology enhanced learning (TEL), multimedia learning, computer-based instruction (CBI), web-based training (WBT), flexible learning, virtual learning (VLE) among others. Okele (2008), defines Electronic learning as a branch of Information and Communication Technology (ICT) that focuses on the application of information technologies by using electronic devices to disseminate the information. Electronic learning is a sub-system in ICT which involves the use of computer network and web-based technology to facilitate learning opportunities and boost individual performance. The principle of e-learning is an inter-connectivity which is the process by which computers are networked to share information which can link people together. E-learning has some packages which are referred to as hardware, software and connectivity components required for learning.

The use of e-learning platforms provided opportunities for both students and staff of tertiary institutions to continue their normal teaching and learning activities during the COVID-19 lockdowns and has been adopted even in the post COVID-19 era, thereby mitigating to large extent, the adverse effects of the lockdown on their staff and students and hence contributing to an effective instructional delivery.

Effective instructional delivery embraces all human interactive skills employed by the teacher to promote/facilitate learning in the classroom situation thereby leading to improved performance on the part of the learner. It is a process in which teachers apply repertoire of instructional strategies to communicate and interact with the learners around academic content, and to support student engagement for better learning outcome (Leonard, 2013). For effective instructional delivery to take place in tertiary institutions, e-learning must be well utilized in all aspects of education and discipline in teaching and learning of different courses especially Electrical/Electronic technology courses that relates to digital applications and during the post COVID-19 era.

Electrical and Electronic Engineering or Technology is a field of study that implements and applies the principles and behavior of electrons to develop devices and equipment. Indeed, it deals with the design, application, installation, manufacturing, operation and/or maintenance of electrical/electronic systems (Sloan, 2010). It offers knowledge and skills for work and lifelong learning in various engineering and technology fields. Its study

manipulates electricity to design and manufacture products that transmit power or process information. The syllabus therefore, offers broad-based competencies in an appropriate combination of concepts that has to do with circuit design and development. Electrical/Electronic technology is the largest branch of engineering technology and includes a diverse range of subdisciplines such as applied design, electronics, embedded systems, control systems, instrumentation, telecommunications, and power systems (Robinson, 2008). Electronic sub-discipline is a specialized discipline that has more focus on application, theory, applied design, and implementation of the properties of electrons. Electronic sub-discipline also has to do with the use of some components like transistor, capacitor, resistor and diode to develop electronic systems (Bill, 2006). It brings up a workforce with professional skills in both theory and practical; enabling students to use the computers and other electronic systems as at when needed during teaching and learning. Instructional delivery in Electrical/Electronic Technology courses were affected mostly due to the outbreaks of COVID-19 which have negatively impacted on various sectors of the economy including education.

Corona Virus Disease (COVID – 19) written as covid-19 refers to an infectious disease caused by a virus known as corona virus. Corona virus was not common in the world till December 2019, when its first appearance was observed in Wuhan, China. Covid-19 is an infectious disease because it can be transferred from a positive carrier of the virus to another who does not have the disease but near the affected person. This deadly disease was declared a global pandemic by World Health Organization (WHO) on March 11, 2020, after claiming several lives globally. The severity of covid-19 is more on the economies of most developing nations around the world including Nigeria. Corona virus whose history is traceable to China was first noticed in Nigeria in February 2020. The disease posed a serious health risk to all Nigerians particularly, the elderly as many of them died from it due to poor immunity. Since the menace of covid-19, the Nigerian economy was adversely affected as most states of the federation declared partial or complete lockdown in their territories resulting in the closure of businesses, markets, schools, mosques and churches, eateries and schools among others. These effects were felt as no meaningful academic activities took place within this period.

Academic activities involve all processes carried out by lecturers within the universities. It comprises of teaching and learning between lecturers and students, giving and submission of assignment, administration of test and examinations, supervision of projects, thesis and dissertations and assessment of students among others. In a bid for the sustenance of these academic activities despite COVID-19, the universities adopted the use of e-technologies in the teaching and learning process which was later introduced and used by lecturers in Technical Vocational Education programmes. With these technologies, lecturers were able to deliver their lessons effectively, assignment were completely done and submitted, examinations were conveniently and comfortably administered and other academic activities were carried out effectively. These online technologies make lecturers to interact seamlessly with their students notwithstanding the location, or physical barrier between them. Hence, this study attempts to examine utilization of e-learning technologies for effective instructional delivery of

Electrical/Electronic Technology courses in tertiary institutions in Rivers State in the post COVID-19 era.

Statement of the Problem

Technology has introduced new methods of learning and teaching through online for speedy development. Many developed countries have exploited the potentials of technology while the developing countries like Nigeria are also exploiting same in order to improve and transfer education at landscape in institutions of learning. But how effective has instructional delivery in Electrical/Electronic Technology courses in these tertiary institutions as regards to utilization of e-learning technologies platforms.

The advent of new technologies most especially e-learning platforms like; Zoom, Google plus, YouTube, MySpace, Skye, Academia.edu, Twitter, Instagram, Whatsap, We-chat, Docebo, Adobe, Captivate, Google Classroom, Elucidat, Lectora, Blackboard learn, Articulate 360, LinkedIn learning, shift e-learning, udemy, coursera and Moodle has made the world a global village. The Federal Republic of Nigeria (FRN, 2013) in its national policy on education stated that students at all levels of educational system should utilize Information and Communication Technologies such as the internet to enable them complete their education. As a result of the pandemic, most universities across the world were cut in gap for not being able to make use of e-learning platforms for teaching/learning activities. Also, several tertiary institutions due to the lack of these e-learning facilities or lack of technical know-how were unable to make proper use of these platforms for effective teaching/ learning to their students which resulted to overlapping issues in taking examinations, defense, seminars and graduating students as in when due. These inability resulted to truncating of academic activities. The quality of teaching/learning by lecturers and students of Electrical/Electronic Technology cannot be overemphasized as several schools did not participate in online activities and hence most of the e-learning platforms were not utilized for the purpose of learning and research in our different respective tertiary institutions.

The above assertion has made some students to drop out of school and some suffered financial burden of paying extra-charges on school fees.

This breakdown in academic activities in some schools revealed that there was low or absent of online teaching and learning during this pandemic which hinders students carrying out their research studies even in the post era of the pandemic. It is against this backdrop that this study seeks to examine utilization of e-learning technologies for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State.

Purpose of the Study

The purpose of the study was to examine utilization of e-learning technologies for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State. Specifically, the study seeks to:

1. Identify various e-learning technologies utilized for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State.
2. examine the benefits of utilizing e-learning technologies for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State.
3. Find out the challenges facing the utilization of e-learning technologies for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State.

Research Questions

The following questions were answer to guide the study.

1. What are the various e-learning technologies utilized for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State?
2. What are the benefits of utilizing e-learning technologies for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State?
3. What are the challenges facing the utilization of e-learning technologies for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State?

Methodology

The study adopted the descriptive research survey design. The study was carried out in tertiary institutions in Rivers State offering Electrical/Electronic Technology. These institutions include Rivers State University (RSU), Port Harcourt, Ignatius Ajuru University of Education (IAUE), Rumuolumeni and Federal College of Education, Technical (FCET), Omoku. The population of the study comprise of all lecturers and postgraduate students of Electrical/Electronic Technology. This gives a population of 47 respondents (Lecturers = 11; Postgraduate Students = 36). Due to small population size, the entire population was used in for the study and hence no sample and sampling technique was done. The instrument for data collection was a self-structured questionnaire titled “Utilization of E-learning Technologies in Electrical/Electronic Courses Questionnaire (UETEECQ)”. The instrument was design and pattern after a modified rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with numerical values of 4, 3, 2 and 1 respectively.

The instrument was given to three experts for face and content validation. Two of the experts in Electrical/Electronic Technology from Rivers State University, Port Harcourt and one expert in Measurement and Evaluation from Ignatius Ajuru University of Education respectively. To establish the internal consistency of the instrument and test the reliability, test-retest method was used by administering copies of the instrument to four lecturers and 11 postgraduate students from Electrical/Electronic Engineering from Rivers State University, Port Harcourt (initial test). After an interval of two weeks, the

same instrument was readministered to the same group (final test). At the end of the second test, the initial and final scores were collated and analysed using Pearson Product Moment Correlation (PPMC) and a coefficient (γ) of 0.86 was obtained. The instrument was administered to 47 respondents and all the copies were completely filled and successfully retrieved. This indicates 100 percent return rate. Data collected were analysed with frequency and percentage for research question 1 while research question 2 and 3 were analysed using mean with standard deviation. The decision was that any platform with a percentage of 50 and above was considered to be Agree (A) for instructional delivery in Electrical/Electronic Technology, otherwise Disagree (D). Also, any item with mean score of 2.50 and above were considered as Agree (A) otherwise Disagree (D).

Results

Results from the study were presented in Table 1 to 3 below.

Research Question 1: What are the various e-learning technologies utilized for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State?

Table 1: Frequency and Percentage Response of Respondents on Various E-learning Platforms Utilized in Electrical/Electronic Technology Instructional Delivery

S/N	E-learning Technologies Platforms Utilized	YES (%)	NO (%)
1.	Udemy	0.00 (0.00)	47 (100)
2.	Skillshare	0.00 (0.00)	47 (100)
3.	Pluralsight Skills	0.00 (0.00)	47 (100)
4.	LinkedIn Learning	0.00 (0.00)	47 (100)
5.	CBT Nuggets	0.00 (0.00)	47 (100)
6.	Udacity	0.00 (0.00)	47 (100)
7.	Cloud Academy	0.00 (0.00)	47 (100)
8.	A Cloud Guru	0.00 (0.00)	47 (100)
9.	ITProTV	0.00 (0.00)	47 (100)
10.	Khan Academy	0.00 (0.00)	47 (100)
11.	Coursera	0.00 (0.00)	47 (100)
12.	Lynda	0.00 (0.00)	47 (100)
13.	Masterclass	0.00 (0.00)	47 (100)
14.	Codecademy	0.00 (0.00)	47 (100)
15.	Edx	0.00 (0.00)	47 (100)
16.	Iversity	0.00 (0.00)	47 (100)
17.	Zoom	47 (100)	0.00 (0.00)
18.	Whatsapp	47 (100)	0.00 (0.00)

Source: *Researchers' Field Work; 2021.*

Table 1 revealed that the respondents agree that majority of the listed e-learning platforms identified were not utilized in Electrical/Electronic Technology for effective instructional delivery in tertiary institutions in Rivers State. This was shown in frequency response of the respondents.

Research Question 2: What are the benefits of utilizing e-learning technologies for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State?

Table 2: Mean Response on Benefits of Utilizing E-Learning Technologies for Instructional Delivery of Electrical/Electronic Technology Courses

S/N	Benefits of Utilizing E-Learning Technologies	Lecturers XSDRMK X		Students SD RMK	
19	E-learning technologies makes learning interesting.	2.63	0.53 A	3.11	0.70 A
20	Learning materials can be accessed irrespective of time and space.	2.89	0.68 A	3.80	0.48 A
21	It is less stressful.	2.63	0.70 A	2.74	0.84 A
22	It provides multiple sources of knowledge	3.47	1.01 A	2.86	1.01 A
23	E-learning platforms stimulates students' interest in learning.	3.55	0.66 A	3.21	0.50 A
24	E-learning platforms makes lessons more interactive.	3.04	0.85 A	3.05	0.76 A
25	It creates online community of practice.	2.84	1.11 A	2.79	0.88 A
26	It enhances active learning in among students.	3.55	0.67 A	3.88	0.67 A
27	It promotes immediate feedback.	2.96	0.57 A	2.73	0.84 A
28	It allows learners move at their own pace.	3.74	0.69 A	3.26	1.01 A
Average Mean/SD		3.13	0.75 A	3.14	0.77 A

Source: *Researchers' Field Result; 2021.* A - - Agreed

Result from Table 2 shows that the respondents agree that all the items listed are benefits of utilizing e-learning technologies for effective teaching of Electrical/Electronic Technology courses in tertiary institutions in Rivers State. This was shown in mean scores of the respondents with a mean value greater than 2.50 as the benchmark on the four-point rating scale.

Research Question 3: What are the challenges facing the utilization of e-learning technologies for effective instructional delivery of Electrical/Electronic Technology courses in post COVID-19 era in tertiary institutions in Rivers State?

Table 3: Mean Response on Challenges Facing the Utilization of E-Learning Technologies for Instructional Delivery of Electrical/Electronic Technology Courses

S/N	Challenges Facing Utilization of E-Learning Technologies	Lecturers			Students		
		X	SD	RMK	X	SD	RMK
29	Poor internet connectivity	3.60	0.84	A	3.11	0.60	A
30	Computer illiteracy among users	3.70	1.01	A	2.63	0.64	A
31	Lack of resources	2.68	0.83	A	3.72	1.01	A
32	Learning materials cannot be accessed and downloaded in time to support efficient learning	3.04	0.66	A	3.40	1.03	A
33	High cost of personal computer.	3.55	0.74	A	3.94	0.66	A
34	Inequality of access to the technology itself by all the students.	2.94	1.03	A	3.30	0.75	A
35	High cost of acquiring license software	3.14	0.84	A	2.77	0.59	A
	Average Mean/SD	3.24	0.85	A	3.27	0.75	A

Source: *Researchers' Field Result; 2021.* A - - Agreed

Result from Table 3 shows that the respondents agree that all the items listed are challenges facing the utilization of e-learning technologies for effective teaching of Electrical/Electronic Technology courses in tertiary institutions in Rivers State. This was shown in mean scores of the respondents with a mean value greater than 2.50 as the benchmark on the four-point rating scale.

Discussion of Findings

Findings from Table 1 revealed that the respondents agree that majority of the listed e-learning platforms identified were not utilized in Electrical/Electronic Technology for effective instructional delivery in tertiary institutions in Rivers State. This finding is in line with the findings of Stephen (2013) which held that e-learning utilization is dependent on the school and its administrative skill. Stephen noted that the employment of qualified and knowledgeable staff in ICT and free internet access would help improve the staff and students' e-learning capabilities.

Result from Table 2 shows that the respondents agree that benefits of utilizing e-learning technologies for effective teaching of Electrical/Electronic Technology courses in tertiary institutions in Rivers State include enhances active learning in among students, promotes immediate feedback and that it is less stressful. The findings of this study agree with that of Okoro (2021) who found that some of the benefits of using e-learning technologies include making teaching and learning more interesting, allows learners move at their own pace, provision of immediate feedback, flexible to adopt among others. The findings also agree with Panda and Swain (2009) who submitted that e-learning platforms benefits teaching and learning. The findings are also supported by Eze (2016) who opined

that students' participation in online classes and use e-learning platforms can improve e-learning capability.

Result from Table 3 shows that the respondents agree that challenges facing the utilization of e-learning technologies for effective teaching of Electrical/Electronic Technology courses in tertiary institutions in Rivers State include poor internet connectivity, high cost of acquiring license software, lack of resources, high cost of personal computer and computer illiteracy among users. The findings of this study agree with that of Okoro (2021) who found that some of the challenges facing the use of e-learning technologies include shortage of power supply, non-availability of e-learning facilities, poor internet connectivity, high cost of equipment and computer illiteracy among lecturers among others.

Conclusion

The study concludes that various e-learning platforms for teaching and learning are not utilized by in tertiary institutions in Rivers State which affects effective instructional delivery of Electrical/Electronic Technology courses. In spite of its low platforms' utilization, it is beneficial in instructional delivery within the institutions. However, the utilization of e-learning technologies in tertiary institutions were found to be marred with challenges which hinders its level usage by students and lecturers of Electrical/Electronic Technology in effective delivery of courses.

Recommendations

The following recommendations were made based on the findings of the study.

1. E-learning platforms that are available should be encouraged and used among students and lecturers as it is obtainable in other institutions for academic activities. This will serve as an alternative for face-face teaching and learning processes.
2. The Department/institution should improve their ICT facilities and provide free internet access. This will create awareness about the potentials and prospects of e-learning in Electrical/Electronic Technology and the school generally.

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E-TEACHING SKILLS NEEDED BY BUSINESS EDUCATION LECTURERS FOR TEACHING IN COVID -19 ERA

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Abstract

The study sought to identify Electronic learning skills needed by Business Education Lecturers for teaching in COVID-19 era. The descriptive survey research design was used. To facilitate the conduct of the study, three research questions were raised. The population of the study consisted of all Lecturers of in the department of Business Education in Federal College of Education, Pankshin. The number of the lectures used was 18. No sampling was done; the entire population was used. A 28-item questionnaire tagged “Internet skills needed for teaching questionnaire (ESNT) with 4-point rating scale was the instrument used for data collection. The data collected were analyzed using mean and standard deviation. The null hypotheses were tested using the independent t-test at 0.05 level of significance. Findings revealed that internet, software and formatting skills are needed for teaching during covid-19. This means that without sufficient amount of internet, software and formatting skills, business education lecturers will find it difficult to teach in COVID-19 era. The study recommended among others, that Business Education lecturers should take it upon themselves to acquire internet and formatting skills sufficiently for successful e-teaching and there is a need for business education lecturers to learn software and formatting skills by means of special training. This can also be achieved by interacting with some of their colleagues who are good in these skills and are used to e- teaching.

Key-words: E-Learning Skills, Business Education, COVID-19, Teaching, Business Education Lecturers.

Introduction

Coronavirus Disease 2019 (COVID-19), which began in Wuhan, China, in December 2019, was declared a pandemic by the World Health Organization (WHO) on March 11, 2020, after it had spread to other countries around the world. It also forced more than 171 countries around the world to temporarily close their educational institutions by the year 2020. The impact of COVID-19 on education is unusual and unprecedented in



history because more than 1.5 billion students from across the globe have been affected by school closure.

According to Wikipedia, the first confirmed case of the pandemic of coronavirus disease Nigeria was announced on 27th February, 2020, when an Italian citizen in Lagos tested positive for the virus. On 9 March, 2020, a second case of the virus was reported in Ogun State, a Nigerian citizen who had contact with the Italian citizen. As a result of this pandemic, the Federal Government of Nigeria announced lockdown of major cities to curb coronavirus spread. According to Mbah (2020), Nigeria implemented a sweeping quarantine for three major states (Lagos, Ogun and Abuja) that are home to almost 30 million people in a bid to slow the spread of COVID-19; this further spread to all the 36 states of federation. Evidently the, this lockdown affected the educational institutions in the country and as result caused discontinuity in education as some of these institutions were at the point of preparing for examination, admitting students, beginning a new semester, amongst others.

According to the report by UNESCO (2020), the closure of educational institution has impacted over 91% of the world's student population. The ripple effect of this pandemic has been felt by both the educators and students across all levels of formal education.

Institutions around the world including Africa have assisted to finding ways to cope and adapt to academic changes as a result of this pandemic. COVID-19 pandemic has shaped a new normal for the higher education sector across the globe from transforming the online learning platform, restructuring application processes, and stimulating crisis management strategies. The COVID-19 outbreak has opened up the importance of online education and distance learning. However, just a handful of the world's education are taught online. According to Eduventure (2019), in the United States of America, about 15% of the total undergraduate students are enrolled for online and distance learning. Developed economies such as Canada, United Kingdom and United States have experienced a decline in their educational revenue. As the result, foreign students either quit their studies or are back home. The pandemic has resulted in more severe consequences for schools that cannot access online learning platforms.

The COVID-19 pandemic ravaging the world have had effects on many sectors of the economy, especially in Nigeria. This effect is evident in the Nigeria educational sector has the academic session was halted by the Federal ministry of education in order to curtail the spread of this virus in educational institutions. Although, this decision came as a shock to many educational institutes as many of these institutions were not prepared for the sudden disruption, others have seen it as a step in the right direction. Most Nigerian students and students from other African countries were disadvantaged because most educational institutions in Nigeria still follow the traditional set-up of face-to-face lectures in normal classroom settings, resulting in the use of e-learning, which has not been taken seriously by most institutions as the best alternative learning method.

E-learning has become an inevitable technology for teaching business education. Otuka (2019) sees e-learning as all forms of electronically supported teaching and learning which are procedural in character and aim to affect the construction of knowledge with

reference to individual experience, practice and knowledge to the learner. According to Eze et al. (2018), e-learning education is concerned with the wholistic corporation of modern telecommunication equipment and ICT resources into the education system. It is seen as the process of delivering knowledge via electronic media, which include; audio video tape, interactive T.V, CD-ROM, electronic board, interactive software platforms and e-library.

E-learning according to Ojeaga and Igbinedion, (2012) involve the use of technology to enhance learning which include digital collaboration, satellite broadcasting, CD-ROMS amongst others. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio- and video-tape, satellite broadcast, interactive TV, CD-ROM, and more). E-learning has so many advantages over the traditional method of teaching and learning. E-learning can accelerate, enrich and deepen basic skills in reading, writing and can motivate students to learn as they become more independent and responsible for their learning. Empirical studies revealed that technology encouraged active learning, support teaching, reduce the isolation of teacher and promote teachers and students in learning and research (Akubueze, 2012). Hall and Snider (2000) viewed e-learning as the process of learning via computers internet and intranets. It was also referred to as web-based training, online training, distributed learning or technology for learning. This goes beyond digital technologies but give students a greater autonomy regarding the point in time to learn at their own pace. The content and the method by which students learn provide online learning that eliminate the barriers of time and distance. Cohen (2001) submitted that the use of e-learning has an effect on all aspects of teaching and learning. When teachers integrated technology into the lesson, it required new learning approaches to the curriculum because of the ability to look at and explore information in new ways. E-learning is a global phenomenon fueled by a variety of economic, technological and social forces, as well as students' demand. The demand for e-learning amongst students, employers and communities for lifelong teaching and learning via greater interactivity, collaboration, access to resources and remote is very high in this technological age.

Business education is a component of vocational technical education programme that prepares an individual for career in business and to be an intelligent consumer of economic goods and services. Business education provides students with the needed competencies, skills, knowledge, understanding and attitudes to perform as workers in industries, civil service and as proprietors of business. Business education is work-focused, skill-based, result-oriented and technology-based (Ugwoke, 2011). According to the American Vocational Association (AVA) in Osuala (2009), business education is a programme of instruction which consists of two parts: (a) office education; a vocational education programme for office careers through initial, refresher and upgrading education leading to employability and advancement in office occupation, and (b) general business education; a programme to provide students with information and competencies which are needed by all in managing personal business affairs and in using the services of the business world.

Amoor (2010) maintains that the goal of business education is primarily to produce competent, skillful and dynamic business teachers, office administrators and businessmen

and women that will effectively compete in the world of work. Its primary aim is the preparation of people for roles in enterprises, such roles could be as employee, entrepreneur and employer or simply self-employed.

For the survival of the business education programme even during the period of COVID-19 and in order to sustain its relevance in providing the needs of individuals and the society, business education must embrace the current trends of e-learning in the academic and economic demands of the society. As a discipline, business education is worthwhile for the development of any society.

Traditional learning relies primarily on the teacher lecturing from a podium down to the crowd, a scenario which may cause—after the first 10-15 minutes—student attention to decline and may lead to complete absence of student concentration (Bligh, 2000). Freeman et al. (2014) report that active learning increases student performance in science, technology, engineering and mathematics STEM. Traditional teaching and learning skills need to change in order to get maximum benefit from e-learning teaching skills especially now that the world is facing the reality of COVID-19 pandemic, lecturers are poised with the task of developing a new model of effective teaching. Moreover, some studies have emphasized that technology can help by allowing learners to take a more active role in their learning through different instructional modes. Therefore, e-learning has been recognized as technological ways for teaching which enables learners to receive and interact with educational materials and resources through internet, as well as engaging with teachers and peers in ways that previously may have been impossible (Asabere & Ahmed (2013).

Despite the numerous advantages of the current e-learning platforms, many professors were unprepared to adjust to new teaching methods, keep students involved and motivated in distance learning, and manage classes remotely. Teachers in some circumstances lacked the appropriate technology and internet connection, and reorienting their training tactics in a short amount of time caused a significant deal of stress, strain, and worry, jeopardizing the teaching staff's working conditions. As a result, business education teachers must know the abilities needed for e-learning during COVID-19 in order to implement the e-learning program, which is currently the principal instruction delivery in every institution across the country (ILO, 2020f). Given the critical role of teachers in establishing a positive learning environment, these issues could have a significant impact on educational quality if left unchecked.

Research Questions

The following research question guided the study;

1. What are the internet skills needed for e-teaching by business education lecturers during Covid-19?
2. What are the software skills needed for e-teaching by business education lecturers during Covid-19?
3. What are the formatting skills needed for e-teaching by business education lecturers during Covid-19?

Hypotheses

- Ho1: There is no significant difference in the responses of business education lecturers on the skills needed for e-teaching during Covid-19 based on their gender.
- Ho2: There is no significant difference in the responses of business education lecturers on the skills needed for e-teaching during Covid-19 based on their years of experience.

Methodology

Descriptive survey research design was adopted for the study. The study was a survey of the opinion of business education lecturers on the skills needed for e-learning teaching during Covid-19. The study population comprised 21 business education lecturers from Federal College of Education Pankshin, Plateau State. There was no sample size because it was sizeable to be used. A structured questionnaire tagged E-learning Skills Needed for Teaching Questionnaire (ESNTQ) designed by the researcher. The ESNTQ consists of 28 items placed on four-point rating scale of Highly Needed (HN) = 4, Moderately Needed (MN) = 3, Fairly Needed (FN) = 2, and Not Needed (NN) = 1. A total of 21 copies of ESNTQ was administered and 18 were retrieved, giving a return rate of 97.5%. The data collected to answer the research question were analysed using mean and standard deviation. The hypotheses were tested using independent t-test at 0.05 level of significance. The following boundary limits were used for item options of the research instrument. Highly Needed (3.50-4.00), Moderately Needed (2.50-3.49), Fairly Needed (1.50-2.49), and Not Needed (0.0-1.49). The hypotheses were rejected when the observed p-value was less than the fixed p-value of 0.05. The hypotheses were not rejected when the observed p-value is equal to or greater than the fixed p-value of 0.05.

Results

Research Question one: What are the internet skills needed for e-learning teaching by business education lecturers during COVID-19?

Table 1: Mean and standard deviation of responses on internet skills needed for e-learning teaching by business education lecturers during COVID-19

S/N	Indicate the level to which these internet skills are needed for teaching	Mean	SD	Remark
1.	Video conferencing technology skill	3.59	0.50	Highly Needed
2.	Ability to record and upload video presentation	3.68	0.48	Highly Needed
3.	E-mail management skill	3.69	0.47	Highly Needed
4.	Webcam for video web conference presentation skill	3.71	0.46	Highly Needed
5.	Webinar skill	3.77	0.43	Highly Needed
6.	Ability to connect to Intranets, extranets, and satellite broadcasts	3.70	0.46	Highly Needed
7.	Smart board Teaching skill	3.71	0.46	Highly Needed
8.	Use of audio/video tapes, interactive television (TV) and CD-ROMs	3.71	0.46	Highly Needed
9.	Computer networking technology skill	3.71	0.46	Highly Needed
10.	Online surfing Knowledge technology skill	3.69	0.47	Highly Needed
Weighted Mean		3.70	0.41	Highly Needed

Table 1 reveals that all the internet skills listed are highly needed: Video conferencing technology skill (mean = 3.59), ability to record and upload video presentation (mean = 3.68), E-mail management skill (mean = 3.69), webcam for video web conference presentation skill (mean = 3.71), webinar skill (mean = 3.77), ability to connect to Intranets, extranets, and satellite broadcasts (mean = 3.70), Smart board teaching skill (mean = 3.71), use of audio/video tapes, interactive television (TV) and CD-ROMs (mean = 3.71), computer networking technology skill (mean = 3.71), and online surfing Knowledge technology skill (mean = 3.69). All the 10 items have their standard deviation ranged from 0.46 to 0.50 which are below the fixed value of 1.96. This means that the responses of the respondents were not too wide spread, the responses are slightly clustered to the mean. In summary, the data analyzed in Table 1 reveals that internet skills are highly needed for e-learning teaching by business education lecturers during COVID-19 (mean = 3.70, SD = 0.47).

Research Question Two: What are the software skills needed for e-learning teaching by business education lecturers during COVID-19?

Table 2: Mean and standard deviation of responses on software Skills Needed for E-learning teaching

S/N	Indicate the level to which these software skills are needed for e-learning teaching	Mean	SD	Remark
1.	WhatsApp innovation	3.54	0.69	Highly Needed
2.	Zoom innovation	3.28	0.69	Moderately Needed
3.	Content downloading and uploading.	3.31	0.69	Moderately Needed
4.	Google Meet innovation	2.87	1.00	Moderately Needed
5.	Graphics software for pictures, simulations, movies and sounds,	3.36	0.71	Moderately Needed
6.	Google Hangouts innovation	3.36	0.67	Moderately Needed
7.	Skype innovation	3.36	0.63	Moderately Needed
8.	Word and data processing technology skills	3.39	0.74	Moderately Needed
9.	Telegram innovation	3.33	0.66	Moderately Needed
10.	Google Classroom innovation	3.39	0.63	Moderately Needed
Weighted Mean		3.32	0.71	Moderately Needed

Table 2 reveals that all the software skills listed are moderately needed except for item 1. WhatsApp innovation is highly needed (mean = 3.54). All the rest are moderately needed: Zoom innovation(mean = 3.28), Content downloading and uploading(mean = 3.31), Google Meet innovation(mean = 2.87), Graphics software for pictures, simulations, movies and sounds(mean = 3.36), Google Hangouts innovation(mean = 3.36), Skype innovation (mean = 3.36), Word and data processing technology skills (mean = 3.39), Telegram innovation(mean = 3.33), Google Classroom innovation(mean = 3.39). All the 10 items have their standard deviation ranged from 0.63 to 1.00 which are below the fixed value of 1.96. This means that the responses of the respondents were not too wide spread; the responses are slightly clustered to the mean. Summarily, the data analyzed in Table 2 reveals that software skills are moderately needed for e-learning teaching by business education lecturers during COVID-19 (mean = 3.32, SD = 0.71).

Research question 3. What are the formatting skills needed for e-learning teaching by business education lecturers during Covid-19?

Table 3: Mean and standard deviation of responses on Formatting Skills Needed for E-learning teaching

S/ Indicate the level to which formatting skills are needed for e-learning teaching	Mean	SD	Remark
1. Windows and file management technology skill	3.38	0.54	Moderately Needed
2. Knowledge of copy, cut, move and paste files in different formats.	3.46	0.50	Moderately Needed
3. Ability to save documents in Cloud	3.28	0.46	Moderately Needed
4. Ability to format documents in word processing.	3.64	0.49	Highly Needed
5. Ability to use Computer Storage Devices (disks, CDs, USB drives, zip disks, DVDs).	3.51	0.56	Highly Needed
6. Ability to change the appearance of the document	3.38	0.71	Moderately Needed
7. Ability to use the settings of a particular software	3.00	0.98	Moderately Needed
8. Ability to format the computer system	3.51	0.60	Highly Needed
Weighted Mean	3.40	0.61	Moderately Needed

Table 3 reveals that Windows and file management technology skill is moderately needed (mean = 3.38), knowledge of copy, cut, move and paste files in different formats is moderately needed (mean = 3.46), ability to save documents in cloud is moderately needed (mean = 3.28), ability to format documents in word processing is highly needed (mean = 3.64), Ability to use Computer Storage Devices (disks, CDs, USB drives, zip disks, DVDs) is highly needed (mean = 3.51). Ability to change the appearance of the document is moderately needed (mean = 3.38), Ability to use the settings of a particular software is moderately needed (mean = 3.00), Ability to format the computer system is highly needed (mean = 3.51). All the eight items have their standard deviation ranged from 0.46 to 0.98 which are below the fixed value of 1.96. This means that the responses of the respondents were not too wide spread, the responses are slightly clustered to the mean. Summarily, the data analyzed in Table 3 reveals that formatting skills are moderately needed for e-learning teaching by business education lecturers during COVID-19 (mean = 3.40, SD = 0.61).

Ho1: There is no significant difference in the responses of business education lecturers on the skills needed for e-learning teaching during Covid-19 based on their gender.

Table 4: Summary of t-test of the difference between the mean response scores of lecturers on the skills needed for e-learning teaching during Covid-19 based on their gender

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Male	21	3.58	0.26	1.36	37	0.164	NS
Female	18	3.67	0.26				

P>0.05

The data in Table 4 reveals that there was no significant difference between the mean ratings of male and female business education lecturers on the skills needed for e-learning teaching during Covid-19 ($t_{37} = 1.36$, $P=0.164$). Therefore, the null hypothesis that states that there is no significant difference in the responses of business education lecturers on the skills needed for e-learning teaching during Covid-19 based on their gender was not rejected. This implied that male and female teachers did not differ in their responses regarding e-learning skills needed for teaching during Covid-19.

Ho2: There is no significant difference in the responses of business education lecturers on the skills needed for e-learning teaching during Covid-19 based on their years of experience.

Table 5: Summary of One-way Analysis of Variance of the Difference in the responses of business education lecturers on the e-learning skills needed based on teachers' qualifications

Qualification	N	Mean	SD	F-cal	Df	p-value	Remark
1 - 5 years	9	3.10	0.50				
6 – 10 years	8	3.17	0.89				
11 – 15 years	12	3.12	0.64	2.05	3,35	0.240	NS
16 – above years	10	3.15	0.48				

$P>0.05$

The data presented in Table 5 reveals that there was no significant difference in the responses of business education lecturers on the skills needed for e-learning teaching during Covid-19 based on their years of experience ($F_{3,35} = 2.05$; $P=0.240$). Therefore, the null hypothesis which stated that there is no significant difference in the responses of business education lecturers on the skills needed for e-learning teaching during Covid-19 based on their years of experience was not rejected.

Discussion of findings

The study was conducted to determine the E-learning skills needed by Business Education Lecturers for teaching during COVID-19. The study found that internet skills are highly needed for teaching during covid-19. This means that without sufficient amount of internet skills, business education lecturers will find it difficult to teach during covid-19. This finding supports the earlier finding of Akubueze (2012) who found that successful online teachers must be vast in internet skills. Internet skills are a requirement for successful online teaching and learning. It was also found that software skills are moderately needed for teaching during covid-19. This indicate that software skills are

needed, but not in a high measure like the internet skills. Having these skills will aid teaching during covid-19. This finding supports the earlier finding of Ojeaga and Igbinedion, (2012) who stated that the use of technology to enhance learning which include digital collaboration, satellite broadcasting, CD-ROMS amongst others. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio- and video-tape, satellite broadcast, interactive TV, CD-ROM, and more).

The study also revealed that formatting skills are moderately needed by Business Education Lecturers for teaching in COVID-19 era. This means that for successful teaching during covid-19, formatting is a moderate requirement. This finding is in line with Otuka (2019) who stated that e-learning as all forms of electronically supported teaching and learning which are procedural in character and aim to affect the construction of knowledge with reference to individual experience, practice and knowledge to the learner. This also indicates that formatting skills would assist lecturers in teaching during covid-19 when they acquire it. The study found no significant difference in the responses of business education lecturers on the e-learning skills needed for teaching during covid-19 based on their gender and years of experience. These findings show that business education lecturers agreed regardless of their gender and years of experience that the e-learning skills used in this study are needed for teaching during covid-19. The findings corroborate Asabere and Ahmed (2013) who stated that some studies have emphasized that technology can help by allowing learners to take a more active role in their learning through different instructional modes. Therefore, e-learning has been recognized as technological ways for teaching, which enable learners to receive and interact with educational materials and resources through internet, as well as engaging with teachers and peers in ways that previously may have been impossible.

Conclusion

Based on the findings of the study which revealed that internet skills are highly needed, software and formatting skills are moderately needed for e-learning teaching. It is concluded that for successful e-learning teaching, lecturers must acquire internet, software and formatting skills. It means that internet skills must be sufficiently acquired by business education lecturers. Anything short of this will mean that lecturers may find it difficult to teach e-learning courses.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Business Education lecturers should take it upon themselves to acquire internet skills sufficiently enough for successful e-learning teaching.
2. There is a need for business education lecturers to learn software and formatting skills by a way of special training. This can also be achieved by interacting with some of their colleagues who are good in these skills and are used to e-learning teaching.

3. That teacher development and re-training should be taken seriously by tertiary institutions managements, who should organize seminars, workshops, conferences and in-service training on ICT and provide the necessary ICT facilities.

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COVID 19 PANDEMIC ERA: A SHIFT IN PEDAGOGICAL APPROACH AS A MEANS OF IMPROVING CHILDREN LEARNING IN TODAY'S CLASSROOM

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Abstract

The study examines Covid 19 Pandemic Era: A Shift in Pedagogical Approach as a means in Improving Children Learning in Today's Classroom. The early years of a child's life are critical; these years determine the children surviving and thriving in life, and laid the foundations for their learning and holistic development. It is during the early years that children develop the cognitive, physical, social and emotional skills that they need to succeed in life. These early experiences are primarily determined by supportive family and early childhood educators, proper nutrition and health care, learning opportunities, which in turn are dependent on enabling policies and investments for young children and families. Pedagogy also is an important part of education and the recent role it plays show we can't but count on more utilization such as new pedagogy in daily class activities most especially in educating and training young children, most importantly due to the pandemic that struck the world as school and other part of the society now call and use contactless mediums in our dealings, one of which is the opportunity provided by some new pedagogies. This paper therefore addresses Covid 19 Pandemic Era: A Shift in Pedagogical Approach as a Means of Improving Children Learning in Today's Classroom. This paper covers some new pedagogies that promote more effective learning, reduce contact between teacher and learners, and among learner. It was recommended that there should be introduction of different innovative approach to explain the content to learners. It is a teacher who plays a vital part in pupils' success. So, it becomes the duty of a teacher to take a step towards accepting modern methods of teaching in teaching pupils.

Introduction

The early years of a child's life are critical, these years determine the child's surviving and thriving in life, and laid the foundations for her/ his learning and holistic development. During the early years that children develop the cognitive, physical, social and emotional skills that they need

to succeed in life. These early experiences are largely determined by supportive family and early childhood educators, proper nutrition and health care, learning opportunities, which in turn are dependent on enabling policies and investments for young children and families. In the last decade, a shift to greater societal reliance on technology as a result of Covid-19 Virus has mandated that young children's educators emphasize the use of technology as a play-based tool to tune into children's learning and cognitive engagement (Arnott, Palaiologou, & Gray, 2018; DeCoito & Richardson, 2018; Fleer, 2018).

The inescapable fact that digital technology is increasingly present within family life, and the reality that many young children are interacting with apps and high-tech toys, has driven early childhood education policy and research to unpack this for preschool teachers (Early Childhood Australia, 2018).

In March of 2020, most countries had to close all schools due to corona virus (COVID-19) school was closed down, classes moved online and remained closed for the rest of the academic year, teachers had to discontinue teaching in schools. As an alternative to pupil teaching, it was suggested that pupil teachers should observe videos of early childhood classrooms and present lessons to pupils online. The outbreak of COVID-19 Pandemic across the world has profoundly altered almost all aspects of life, including education, young children in homes and schools, the lives of pre-service and in-service teachers, and the work of preschool teachers and Nigeria has not been an exception to these changes. The difficulty of handling the outbreak from spreading more widely has made world leaders develop super-strict rules so that the chain of the spread of COVID-19 can be broken.

Some standards that the World Health Organization (2019) has recommended, such as social distancing and physical distancing, have created difficult choices for each country to implement. In Indonesia, "large-scale social restrictions" were adopted in March 2020 due to the increasing number of people infected with COVID-19. These were other regulations followed these in the form of working from home for workers, praying from home, and homeschooling for pupils ranging from the early childhood education level to higher education. According to the United Nations Educational, Scientific and Cultural Organization (2020), as many as 1,186,127,211 learners were affected across the globe, or about 67.7% of the total enrolled learners from 144 country-wide closures, and nations had to change their learning systems due to COVID-19.

Changes in learning systems force schools to implement distance education or online learning, e-learning, distance education, correspondence education, external studies, flexible learning, and massive open online courses (MOOCs). The same conditions and rules apply in the United States. According to the Centers for Disease Control and Prevention (2020), e-learning plans have been implemented, including digital and distance learning options, as feasible and appropriate to ensure the continuity of education for pupils during the COVID-19 pandemic.

A report from The World Bank (2020) stated that several countries had implemented different learning systems as physical schools were closed due to COVID-19. For example, in early February 2020, China implemented an online learning system by holding simultaneous online learning exercises to ensure that learning for pupils was not interrupted. In Bulgaria, in early April 2020, the Ministry of Education and Science launched an e-learning system. In Finland, on account of school closures, instruction and guidance for pupils have been implemented by

distance learning, digital learning environments and solutions and, where necessary, independent learning. Several ways to support e-learning have been found that including creating an e-Content Repository, which publishes materials of pedagogical specialists for working in e-learning environments.

However, given the preschool context of the current study, amidst the varying play-based pedagogical practices in young children's education, the use of technology for preschoolers' science engagement remains rarely undertaken. The concept of early education lays emphasis on the fact that education should start as early as possible, this one being linked either to the preparation for a better understanding role in young children education, by parents or other persons that educate him, either to his enrolment in a kindergarten at the age of two. The second concept is more complex and rich in meanings, expresses the fact that early childhood education is a main domain, which should be described in multi-disciplinary way. In connection with this meaning of the term, concepts as child care, early childhood, and educational care for development are used.

According to Stephanie (2015) Pedagogy relates to the "how", or practice of educating. It refers to, "that set of instructional techniques and strategies which enable learning to take place and provide opportunities for the acquisition of knowledge, skills, attitudes and dispositions within a particular social and material context. It refers to the interactive process between teacher and learner and to the learning environment" (Siraj-Blatchford et al. 2002). It concerns the "how" of adult and child interaction, whilst recognising that how children learn and develop at this stage is not just subject to what is intended to be taught, but it is also of particular importance how it is facilitated.

International studies recognise that children's capabilities are shaped by the quality and range of early experiences and interactions in both the home and ECEC environment. Experiences of young children in ECEC settings are defined by process quality. Process quality refers to the nature of the pedagogical interactions between ECEC staff and children, as well as interactions between peers, and with their environment. Research has shown these interactions and experiences are one of the most significant factors explaining the effects of care and early education on children's learning and development (Stephanie, 2015)

Pedagogical practice has been identified as a critical factor of pre-school children's learning and developmental achievements so this study aims to investigate current pre-school practice and to explore what should be done in the future. Quality pre-school education in the literature indicates the importance of teaching by using Learner-Centered Pedagogy. By definition, learner-centered pedagogy, also known as child centered learning, is a learning that mainly focuses on the needs and interests of the learners rather than those of other involved parties such as administrators and teachers in the education system (Al-Zu'be, 2013, Herbert, 2004, O'Sullivan, 2004). In this approach, the teacher is placed to facilitate the learning, and to focus on the needs, interests, and learning styles of the pupils. Previous studies indicate that the lack of pedagogical skills of teachers who work with young children is closely associated with children's delay in achievement of developmental goals and milestones and causes serious disadvantage in their future work and careers (Herbert, 2004, Sylva et al., 2003, Wood, 2004).

Learner-centered curricula have long been established in the education systems of the West, and have become increasingly desired in developing countries transitioning to democracy (Herbert, 2004, Mtika and Gates, 2010, O'Sullivan, 2004). According to Herbert (2004) "learner-

centered pedagogy becomes instantly appealing because it carries the promise of intellectual liberation from oppressive traditional approaches". Dewey considered education as a powerful agent of societal transformation; his model of education highlighted individualized learning based on active participation and empirical problem-solving (Dewey, 2004)/1916. Dewey's highlighted his views and interests in a democratic education, i.e a deeper perception must focus on the freedom to act as the only means of self-realization available to the individual in a school or classroom context.

On the other hand, Vygotsky's major contributions to today's pedagogical practice are his epistemological views on the nature of human knowledge and influential factors which determine its acquisition (Vygotsky, 1997). The central concept of Vygotskian social constructivism relevant to the present pedagogy is his claim that an individual's knowledge is not transmitted from one person to another (Tracey and Morrow, 2012), but rather it is actively constructed or rather, co-constructed through interactions among learners within a defined sociocultural context (Bell, 2011, Tracey and Morrow, 2012, Wertsch, 1991, Vygotsky, 1978). In other words, knowledge is not external to the learner and awaiting detection by her or him; rather, knowledge "is created through a process of new information interacting with the prior knowledge and experiences of learners" (duPlessis & Muzaffar, 2010). From this perspective, knowledge needs to be engaged rather than "delivered" or "transmitted".

Herbert (2004) asserts that the common aspects to both Dewey's and Vygotsky's approaches is heavy emphasis on learner-centredness, as well as the promotion of active knowledge attainment through exploration, discovery, and reflection rather than passive absorption of facts and skills through rote learning and drilling. Hence, today's pedagogies based on Dewey's and Vygotsky's ideas are "often referred to as learner-based and learner-paced, the latter highlighting the need to tailor instruction to the specific strengths and weaknesses of each individual learner" (Herbert, 2004). That means each person learns differently, hence an individual child's achievement should not be compared to that of other children, but only can be assessed in terms of his/ her own individual progress such as the use of standardized tests (Al-Zu'be, 2013).

Pedagogy and its Forms

According to Learning Portal (2021) Pedagogy refers to the "interactions between teachers, pupils, and the learning environment and the learning tasks." This broad term includes how teachers and pupils relate together as well as the instructional approaches implemented in the classroom. Pedagogical approaches are often placed on a spectrum from teacher-centered to learner-centered pedagogy; though these two approaches may seem contradictory, they can often complement each other in the realisation of educational goals for example, a teacher-centered approach may be useful to introduce a new theme, while a learner-centered approach may be necessary to allow pupils to explore these ideas and develop a deeper understanding.

Teacher-Centered Pedagogy: Teacher-centered pedagogy positions the teacher at the centre of the learning process and typically relies on methods such as whole-class lecture, rote memorization, and chorus answers (i.e., call-and-response). This approach is often criticized, especially when pupils complete only lower-order tasks and are afraid of the teacher. However,

whole-class teaching can be effective when teachers frequently ask pupils to explain and elaborate key ideas, rather than merely lecture.

Learner-Centered Pedagogy: This pedagogical approach has many associated terms (e.g., constructivist, pupil-centered, participatory, active), but generally draws on learning theories suggesting learners should play an active role in the learning process. Pupils therefore use prior knowledge and new experiences to create knowledge. The teacher facilitates this process, but also creates and structures the conditions for learning. Considerable research and advocacy has promoted learner-centered pedagogy in recent years for economic, cognitive, and political reasons. Some research suggests this approach can be very effective but it is also difficult to measure consistently. It is often challenging for teachers to shift from teacher-centered pedagogy to learner-centered pedagogy, and so considerable support may be needed if this is an important goal for a given education system.

Learning-Centered Pedagogy: “Learning-centered pedagogy” is a relatively new term that acknowledges both learner-centered and teacher-centered pedagogy can be effective, but teachers must consider the local context, including the number of pupils in the class, the physical environment, the availability of teaching and learning materials, etc. It suggests that teachers should be flexible and carefully adapt their pedagogical approaches based upon the school environment.

Meaning and Nature of Pre-school

A pre-school, also known as nursery school, Preschool school, or play school, is an educational establishment or learning space offering early childhood education to children before they begin compulsory education at primary school. It may be publicly or privately operated, and may be subsidized from public funds. Preschool is an early childhood program in which children combine learning with play in a program run by professionally trained adults. Children are most commonly enrolled in preschool between the ages of three and five, though those as young as two can attend some schools. Preschools are different from traditional day care in that their emphasis is learning and development rather than enabling parents to work or pursue other activities (Encyclopedia of Children’s Health, 2021).

According to the Encyclopedia (2019), Preschool is an early childhood program in which children combine learning to play in a program run by professionally trained adults. Children are most commonly enrolled in preschool between the ages of three and five, though those as young as two can attend some schools. Preschools are different from traditional day care in that their emphasis is learning and development rather than enabling parents to work or pursue other activities. Preschool may be privately owned and operate as for profits, independent, non-profits, and programs sponsored by religious organizations and maintain an educational philosophy in accord with the parent institution. Though the margin is small, private preschools still claimed the majority of total preschool enrollment. The educational quality of private preschools varies from program to program. Regulation is primarily by state child care agencies, but the arrangement varies from state to state (ESSLE, 2020). As a result of federal government policy on at least a year compulsory preschool education, a growing number of states have started to fund preschool

programs offered at public schools, called Preschool programs. They may be administered by the local school board or by an independent body form by the school. Preschool types in Nigeria as prescribed in the national minimum (NMS, 2004) standards for IECD implementation in Nigeria are as follows: Day Care/crèche (for ages 0-2 years), Pre-nursery/Play group; (ages 3-4 years), Nursery/Kindergarten (ages 3-5 years). These may exist together or independently. They may also be home based, centre based, or mobile.

According to Encyclopaedia Social Sciences and the Law Education (2020), Preschool is an early childhood program in which children combine learning with play in a program run by professionally trained adults. Children are most commonly enrolled in preschool between the ages of one and five, though those that are younger can attend. Preschools are more than traditional day care, in preschool, emphasis is on learning and development rather than enabling parents to work or pursue other activities.

Common pedagogical approaches in Early Childhood Education

Scholars in the field of early childhood education are still debating the inclusion of digital technologies in play-based pedagogy and our understanding of digital play in early childhood education is still developing. Technology, digital media and popular culture form an important aspect of young children's life-worlds in contemporary post-industrial societies. A problem for early childhood educators is how to most effectively integrate these aspects of children's life-worlds into the provision of play-based learning. Traditionally, research has considered barriers to teacher uptake of technologies in the early years, or teacher beliefs and attitudes about using technologies with young children. An alternative perspective focuses on children's play as the foundation for early childhood curriculum provision and argues that what is needed instead are "new" concepts of play more appropriate for explaining children's contemporary play experiences in post-industrial societies. Although early childhood education teachers' are competent users of digital technologies in their personal lives and the classrooms have been digitalised to a large extent, the teachers are still hesitant in embedding these in their curriculum practices (Fayiz, 2016; Ioanna 2016 & Susan 2016).

There has been development of a pedagogy that enables young children to learn in developmentally appropriate play-based and pupil-focused environments (Sandra, 2016). Incorporation of digital technology into pedagogical practices has been seen in early childhood education (ECE). Teachers incorporated digital storytelling in their classrooms to enhance learning. The results emphasis on specific points may assist teachers, parents, educational researchers and education policy-makers in using technological tools in young children's learning environments (Pelin, 2016). A further area worthy of investigation involves the role of content in early childhood education, specifically the relationship between content, context and pedagogy. Digital literacy is an important aspect to consider within teacher education as a way to address twenty-first century learner needs, particularly in early childhood contexts where developmental concerns should be paramount in making instructional design decisions (Lee, 2017). A nature-based social-emotional approach to supporting young children's holistic development that can be applied in a range of early childhood settings from forest kindergartens and nature-based preschools to more traditional centre-based early childhood programs. "The Social-Emotional and Environmental Education Development (SEED) Framework" blends early childhood education,

environmental education, and social emotional development through the integration of best practice (Deborah, 2016).

Traditional Teaching Methods

The traditional methods of teaching are still prevalent in most parts of our nation. In educational institutions, teachers are the only source to gain information. Teachers explain the concept to the learners with the use of blackboard and chalk. They write all the contents on the blackboard and ask the students to note it down in their notebooks and memorize and recite the notes (Eduvoice, 2021).

Advantages of Traditional Teaching Methods

Traditional teaching methods have many advantages: Traditional teaching methods, i.e., classroom-based teaching, is not as expensive as modern teaching methods. So, the rural areas can practice it with no stress of finance; In traditional methods of teaching, pupils and teachers form strong bonds, and they interact more than modern teaching methods; Discipline can be maintained better in traditional teaching settings than in modern ways of teaching; There are some subjects such as physics, chemistry, and mathematics that need a blackboard explanation and can be understood well when explaining on a blackboard; Technical knowledge is not needed in traditional teaching methods like modern teaching methods require a more specialized approach; Unlike modern teaching methods, traditional teaching methods do not harm the eyes of pupils (Eduvoice, 2021).

Game Based Learning as Innovative Teaching Approach

Taking into account the fact that games represent a main aspect of children specific trajectory of development, it is time to reconsider game influence. Starting from traditional games, as they are understood, also digital games can have their contribution to the child's education and evolution. When the game is used in education, it gets significant psycho-pedagogical functions, ensuring an active participation of children in learning process. Actually games can be used in education, bringing added value to educational practice. Game Based Learning (GBL) is an innovative approach, and the studies in the field of GBL show a clear relation between playing digital games and learning. A number of several reasons have been argued in favor of digital games as learning tools, with the more cited argument being that they can enhance pupils' motivation towards learning because of their engaging nature. Indeed, digital games can provide challenging experiences that promote the intrinsic satisfaction of the players, keeping them engaged and motivated.

Play-Based Learning

Play-based learning is a fundamental concept for explaining how children in their early years learn and develop. The efficacy of a pedagogical practice and approach is linked to how well it facilitates play in the learning environment. A further dimension of this notion examines the forms of play used and which are found to be most effective in helping children to learn and develop. Traditionally, free play, that is, activities that are initiated and freely chosen by the child, and sustained without adult interference, is perceived as the purest form of play and is most highly

valued by early year's practitioners, especially in ECEC systems with socio-pedagogic traditions (Walsh et al., 2010).

However, research by Sylva (1984) demonstrates that some activities are more engaging and stimulating for children (e.g. art, puzzles and games, constructional materials) than others (e.g. dough, sand and dressing up). Play has been found to contribute to a child's development most when it is regarded as meaningful. Meaningful play is seen as a medium for learning when "play opportunities offered to children are playful and engaging to them" (Stephen, 2010: pp.4). It is thus worth differentiating between unguided and guided free play. Unguided free play is found to be far less effective in stimulating early learning than guided free play.

Delivering Pupils' Teaching Online

The following sections describe the different phases of planning, implementation, and reflection in redesigning the process for the practicum for the pupil teachers. Many problem-solving skills are required for any teacher educators, whether they are teaching online or in face-to-face classes. With no other option but to offer courses online due to recent school closures in the USA as a result of COVID-19, teachers decided to take a new path and design an online course for the pupil practicum which was required to teach in 2020.

Advantages of Modern Pedagogical Approach

Modern pedagogical approach has many advantages: Unlike traditional teaching methods, modern teaching methods are more interactive and keep pupils intact. It maintains the interest of pupils by animations and videos; the visual medium is way better than any other medium to give instructions. It helps to memorize the concept fast and for a more extended period than reading; Modern teaching methods are less time-consuming. Teachers take less time to cover the syllabus. Writing on the blackboard is not required; Blackboard explanation of content is less explanatory than a representation of videos and animations used in the modern teaching methods (Eduvoice, 2021).

Conclusion

After a detailed study of different pedagogical approach, it is difficult to select which pedagogical way of teaching is better, both traditional teaching methods and modern teaching methods have their pros and cons. They are similar but also different from each other. Modern teaching methods should consider conventional methods of teaching as its base and teachers should not neglect it completely while incorporating the new ones. However, modern teaching methods are suitable for the current century to cope up with surroundings and recent happenings in the environments. While technology undoubtedly has changed education, many educators opt to use a more traditional, low tech approach to learning. Most pedagogical approach requires a physical presence and interaction between the educator and the pupils. Additionally, some research has shown that low-tech classrooms may boost learning. For example, pupils who take handwritten notes have better recall than pupils who take typed notes.

Another downside of technology in the classroom may be that pupils exposed to spell check and autocorrect features at an earlier age may be weaker in spelling and writing skills.

Ultimately, tailoring the learning experience to different types of learners is incredibly important, and sometimes pupils work better with a low-tech approach. As the primary teaching strategy under the teacher-centered approach, direct instruction utilizes passive learning, or the idea that pupils can learn what they need to through listening and watching very precise instruction. Teachers and caregivers act as the sole supplier of knowledge, and under the direct instruction model, teachers often utilize systematic, scripted lesson plans. Direct instruction programs include exactly what the teacher should say, and activities that pupils should complete, for every minute of the lesson. Because it does not include pupil preferences or give them opportunities for hands-on or alternative types of learning, direct instruction is extremely teacher-centered. It's also fairly low-tech, often relying on the use of textbooks and workbooks instead of computers. The new ways of teaching make pupils more productive and encourage them to collaborate. Both methods are effective but which will be done during this time is the question, and clearly, the importance of modern teaching methods can be felt clearly.

Recommendations

The COVID-19 pandemic has exacerbated social inequalities, inequity and exclusion, while paradoxically presenting an opportunity to strengthen social relations, guided by solidarity and collaboration in pursuit of the common good, and also by responsibility for the care of others, as an essential dimension of one's own care and survival. The current crisis has given new meaning to educational system globally, it is highly recommended that:

- i. The introduction of different innovative approach to explain the content to learners is the responsibility of teachers to teach pupils with suitable and modern methods. It is a teacher who plays a vital part in pupils' success. So, it becomes the duty of a teacher to take a step towards accepting modern methods of teaching in teaching pupils.
- ii. To provide a sound education, there should be an amalgamation of a skilled teacher and innovative ways of teaching, so that pupils' will be ready with not only theoretical knowledge but also with practical experience of subjects to face the world and compete against their competitors.
- iii. Further studies and research into the success or otherwise of this sudden migration from traditional face-to-face teaching to online education is therefore recommended as this will provide the necessary data and findings on how effective this sudden change has been to students.

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