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Examining Students' Awareness Level of Virtual Learning during COVID-19 Era in Delta State Tertiary Institutions

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ABSTRACT

The study examined virtual learning during COVID-19 era with particular emphasis on Business Education student's awareness level in the learning process. To effectively investigate the issue under review, two research questions were raised that dwells on students' awareness patterns, the benefits and challenges inherent in virtual learning during the period. The descriptive survey research design was adopted for this study. The entire Business Education students from 200 level to 400 level in the institutions under review, constitutes the population studied. The sample for this study comprised one hundred and eighteen (118) students. The simple random sampling method was employed in selecting the students. The instrument for data collection was a researcher developed questionnaire titled –"Students' Virtual Learning Awareness Level Questionnaire" (SVLALQ). The face and content procedure was adopted for the validation of the instrument. Data administered was collated and analyzed using the percentages, mean and standard deviation was used to answer research questions. Findings revealed amongst others that students lack the understanding of and the usage of virtual learning. The study concluded that there are fundamental implications for tertiary institutions in the state if these gender gap in the benefits of virtual learning and challenges discovered in this study with regards to virtual learning, are not bridged. The study recommended amongst others that the school authorities should institutionalize the use of virtual learning, even after the passage of COVID-19 as its benefits outweighs its disadvantages to the teaching learning process.

Keywords: *Virtual Learning, Computer, Business Education, Students, COVID-19*

INTRODUCTION

Virtual learning, also perceived, in some quarters, as e-learning, Internet learning, online learning, computer-based learning, and so on, is a learning experience that is enhanced through utilizing computers, smart phones, technologies and/or the Internet both outside and inside the facilities of the educational organization. The instruction most commonly takes place in an online environment. The teaching activities are carried out online whereby the teacher and learners are physically separated (in terms of place, time, or both). Thus, virtual learning entails distance learning conducted in a virtual learning environment with electronic study content designed for self-paced (asynchronous) or live web-conferencing (synchronous) online teaching and tutoring.

In the 21st century, at the end of 2019 in Wuhan, the high technology business hubs of China experience an epidemic of an entirely distinctive nature termed coronavirus (COVID-19) which appeared and has killed millions as at the last count. The novel virus was nominated as COVID-19 novel coronavirus by the Chinese scientists (Shereen et al. 2020) and adopted by the World Health Organization (WHO, 2020). Later on, within a short period of its occurrence, this COVID-19 spread worldwide, Nigeria inclusive. Several countries' economies were severely affected due to the pandemic and some are still struggling till date. Further, the outbreak changed the operating conditions all over the globe within a month and is still changing in some climes. The consequences of the pandemic were unstoppable and

uncontrollable for many sectors of the world, including the education sector. With its ravaging spread globally and its effect on education, over 120 countries, Nigeria inclusive stopped face-to-face conventional learning; approximately a billion students' education were effected worldwide due to the emergence of the pandemic. Against this backdrop and threat of the pandemic, most of the higher education students, including Business Education students in Delta State tertiary institutions, switched to the virtual learning mode, which is relatively new to a lot of students, especially students in Nigeria and Delta State in particular who were used to the conventional "talk and chalk" process. To tackle the COVID-19 pandemic, almost all the world, and including Nigerian higher education ministry, issued order to close school and higher institutions as an emergency measure to curtail the spread of the infection, and subsequently switched to technology for teaching and learning.

Technologies have changed the traditional way of education to the modern way of learning, like Artificial Intelligence (AI) (Di Vaio et al. 2020). Thus E-learning is covered under a larger term of technology-based learning through websites, learning portals, video conferencing, YouTube, mobile apps, and thousand other types of free available websites for learning tools. Currently, E-learning is enhancing students' knowledge, even the academic staff and professional and industry people skills through the Internet (Adams et al. 2018; Chopra et al. 2019). Most of the higher education institutions are providing and provided online courses for their students within and off campuses. In Nigeria, the government and school heads are providing many resources as aids to higher education. Based on the news reports, the Nigerian universities, colleges, polytechnics; tertiary institutions in Delta State, inclusive used and are still using Massive Open Online Courses (MOOCs) system for its teaching. The growth of the online education market is expected to reach 16.4% annually over the forecast period, 2016–2023. With the massive growth of the Internet and the sudden appearance of COVID-19, maybe university teaching and learning models will be transformed in the next 10 to 15 years. Thus, this study looked at the perception of students on the use of the virtual learning mode in the era of COVID-19 pandemic.

Virtual learning refers to learning through computers and the internet, inside as well as outside the facilities provided by the educational organization. The instructions are provided by the lecturer in an online environment for their students. Virtual learning enhances the creative thinking of students. This ultimately helps in boosting their confidence too. Virtual learning is a unique way adopted by many institutes and universities to impart education to the students effectively. A virtual learning environment aims at creative interactions, active learning environments, as well as plan courses. For instance, meetings are held with the help of videoconferencing as a part of this kind of learning. Discussions between the students and the lecturers take place with the help of using this virtual software. Other examples are podcasts, distance learning degree programmes, etc. Virtual space provides many benefits to students by helping them in increasing their inclusivity, improving their accessibility, and building a positive relationship. Moreover, virtual learning helps in saving the expenses of the students by preventing them from visiting far-off places for attending the classes.

Globally, Nigeria and Delta State in particular, due to COVID-19 outbreak universities and tertiary institutions in Delta State closed and lockdown, most teachers and students are happy and apprehensive by the move towards virtual education. In the light of this trend, lecturers and administrators in the tertiary institutions in Delta State began to get online instructor certifications and tutorial in a bid to effectively and efficiently deliver virtual teaching to their students. It is pertinent to state here that, previously, they were using the conventional face-to-face teaching mode, but with the presence of COVID-19 and the various curtailing measures of its spread being put in place, the shift to online mode has become imperative.

COVID-19 pandemic has affected higher education in Nigeria. The closure of schools meant that administrators of higher education had to come up with strategies to ensure that teaching and learning continues during the lockdown. In this wise, tertiary institutions in Delta State quickly moved from traditional face-to-face teaching method to remote/virtual education. As the period of total lockdown extended, more universities quickly switched to online teaching. Both the teachers and students had to adapt swiftly to the new mode of education as they were trained virtually on how to use distance learning tools, owing to its novel nature. Teachers and students in tertiary institutions Delta State faced challenges in adapting to online classes and maintaining the minimal communication to support learning and development. Migrating to remote learning within a short period was difficult, especially for those

with little knowledge on the application of advanced technology as well as to integrate them into the educational system.

Lecturers involved in the virtual/online teaching provided students with learning materials and pre-recorded lecture videos. Remote teaching was done through online learning management systems such as WhatsApps, Zoom, amongst others. Course materials and pre-recorded lectures were also sent to the students' emails, and sometimes sent to students WhatsApp groups. Online teaching and learning in tertiary institutions in Delta State was both asynchronous and synchronous. Though, students finds it strange at first, but they later adjusted and become interested in the entre process. In asynchronous learning, students can communicate and complete activities at their own time and pace, while synchronous learning activities occurred through live video and/or audio with immediate feedback (Hrastinski, 2008). Management teams in tertiary institutions in Delta State ensured that the quality of teaching and learning was maintained and appropriate methods which address some of the limitations of remote teaching were used. It is important to note that tertiary institutions in Delta State did not prepare for any contingency that may affect education such as COVID-19 pandemic lockdown; however, the management teams of the institution were able to provide guidance and support to ensure that teaching and learning activities continued and students were assessed online, in some cases. This was mostly possible because school closure occurred in an era when technological innovations and digitalization in educational context are readily available.

Theoretical Framework

Virtual Learning – Educational Theories

The virtual learning as perceived in this study is hinged on the theories of Behaviorism**;** examines how students behave while learning. It focuses on how learners respond to certain stimuli. When the teacher repeats the stimuli, they can observe, control, and modify the learner's individual behavior. Learners do what they are instructed to do and are only prepared to reproduce basic facts and automatically perform tasks. Behaviorism does not examine the mind or cognitive processes. In virtual learning behaviorism can be applied through step-by-step video tutorials, game-based activities, regular and constructive feedback, quizzes, gamification, etc; Cognitivism**,** that focuses on the role of the mind and cognitive processes in learning. It explains how the brain is functioning and the levels of cognitive development that form the foundation of learning. Studies of cognitivism help educators understand how people learn and how to teach more effectively. In virtual learning cognitivism can be applied through customizable learning environments, adaptive and personalized learning applications, AI, learning analytics, etc. It is important to provide content that is tailored to your learners' cognitive abilities, such as text, images, multimedia, etc., in which the learners can choose how lessons are presented; and Social constructivism that state that teaching and learning are explained as complex interactive social phenomena that take place between teachers and students. Learning activities focus on experience sharing, teamwork, and collaborative learning. Social constructivism finds perfect application in group discussions, brainstorming, problem-based learning, and small group activities. A great environment for these types of activities is the virtual classroom for live online teaching with interactive tools like collaborative web-conferencing, an online whiteboard, breakout rooms, screen sharing, etc.

Forms of Virtual Learning

The following are the forms of Virtual Learning Mode

- **Computer-Based:** Instruction is not provided by a teacher; instead, instruction is provided by software installed on a local computer or server. This software can frequently customize the material to suit the specific needs of each student.
- **Internet-Based:** This is similar to computer-based instruction, but in this case, the software that provides the instruction is delivered through the Web and stored on a remote server.
- **Remote Teacher Online:** Instruction is provided by a teacher, but that teacher is not physically present with the student. Instead, the teacher interacts with the student via the Internet, through such media as online video, online forums, e-mail and instant messaging.
- **Blended Learning:** This combines traditional face-to-face instruction, directed by a teacher, with computer-based, Internet-based or remote teacher online instruction. In effect, instruction

comes from two sources: a traditional classroom teacher, and at least one of the forms of virtual learning described above.

- **Facilitated Virtual Learning:** This is computer-based, Internet-based or remote teacher online instruction that is supplemented by a human "facilitator." This facilitator does not direct the student's instruction, but rather assists the student's learning process by providing tutoring or additional supervision. The facilitator may be present with the learner or communicating remotely via the Web or other forms of electronic communication.

Conceptualizing of Virtual Learning

Virtual learning has many forms and related terms. These seem very similar but represent different aspects of learning and teaching and can help us understand the essence of "virtual learning." Here are the most commonly used ones:

E-learning - E-learning in its broadest sense refers to using electronic technologies for learning and teaching. The learning activities take place either entirely or partially online. They can be conducted by means of electronic media without the use of the Internet.

Developments in the field of science and technology influenced the education as many other scientific areas. For this, it becomes very important to expand the technological infrastructure for educational institutions, particularly as the methods and technologies of education changing quickly. Internet usage and developed social media interactions by means of the internet technologies has influenced the technology facilitated the pedagogical services. Accordingly, our everyday lives have turn into technology centered more and more (NCTM, 2000). Pedagogic organizations, which are responsible for preparing learners to the future, making further technology utilization through enhancing curriculum. Computer usages assisted instructional systems (Chang, 2002), animations (Lin & Atkinson, 2011), emulation, and 3-D virtual environments have become familiar (Rafi et al. 2006). Other adequate contribution of current technology growth for education is the widening of e-learning environments. With use of advancements in technology and communications, including visible and audial responses has become probable in the learning environment; e-learning environments offer lifelong learning opportunities by removing socio-economic discrepancies (Duran et al. 2006). Advantages of e-learning are: the learner determined the time of learning; materials can be accessed anytime, anywhere via internet connectivity; speed, time, and the amount of courses can decide by e-learners themselves; materials and information is already able to be obtained and can be regenerated; efficiency of the education can be assessed immediately; courses criteria can be dependently obtained by students; teachers are obtainable permanently through e-mail; forums, web, etc.; costs instructional costs were reduced (Gülbahar, 2012)

Web-based learning - Web-based learning refers to the use of a web browser for learning.

Online learning - Online learning is associated with the provision of electronic content available on a computer/mobile device. It might involve the use of the internet, but the use of a web browser is optional. Online learning can be done through programs or apps installed on your personal device, which can also be used offline.

Distance learning - Distance learning does not have to use electronic and web-based technologies. It means learning from a distance; in other words, the participants are physically separated. Distance learning is related to providing instruction to a person who is learning in a place and at a time different from that of the teachers and the other learners. Nowadays, with the development of digital technologies, distance learning is increasingly associated with online learning. The use of virtual classrooms for live online teaching brings distance learning closer to the traditional form of learning by reproducing its main characteristics in the online environment.

Blended learning - This type of learning combines virtual and traditional forms of teaching. The learning content should be digitalized and made available online. Thus, learners are able to control the learning process in terms of time, place, tempo, and method of learning.

Learning shifting toward Online

Toward the end of February, as alerts sounded on the increasing spread of the COVID-19 infection, the World Bank built up a multi-sectoral worldwide task force team to help nation reaction and adapting measures. At that point, just China and some other influenced nations were upholding social distance through the closure of schools. In the meantime, following fourteen days after the fact, 120 countries have closed schools impacting almost a billion students across the world that have experience closures of their schools for the period (Azzi-Huck & Shmis 2020). In this light, the COVID-19 pandemic has forced the universities to close face-to-face education and send students home. This force the universities to introduce courses through online portals. Also, education industries are adopting the technologies available such as digital Video conferencing platforms like Zoom, Microsoft platform, and Webex Blackboard and Google Classroom. Therefore, this will be enhancing E-learning globally.

Therefore, the current study concentrating on the comparison between male and female on E-learning. In this light, applying remote learning and education resources to mitigate the loss of learning: In web-based technology, Electron Learning is well-known as well as the earliest application (Azhari & Ming, 2015). In today the E-learning is getting very popular worldwide. E-learning is described as the delivery of learning through technology and the internet (Aljawarneh, 2020). Almost all the universities and colleges have developed the E-learning portal of their students and faculties. In the 21st century, the E-learning creates a more significant impact on all types of the student, much as the part-time and Full-time or distance learning student in the higher education institution (Azhari & Ming, 2015). Nowadays, the majority of the postgraduate students are registered as a part-time student, because they are working in the companies. E-learning helps them a lot because of their time constrain. The advancement in E-learning has been started through Massive Open Online Courses (MOOCs) for students, society, and the industry as well since 2012 (Margaryan et al. 2015). MOOCs are recognized as a significant development in higher education million of the peoples and student are taking the benefits and uplifting the existing skill (Gupta & Gupta, 2020). Moreover, in recent decades, several Malaysian Universities have adopted the E-learning portals (Paechter & Maier, 2010). Based on the research of Azhari and Ming (2015) highlighted several issues related to the Learning Management System (LMS) of the Malaysian universities such as the lack of trained lectures, slow down of the internet speed, WIFI coverage, infrastructure, the interface of design, quality of content, system use and students' adoption. In the present research, the comparison between male and female students is measured based on E-learning portal success. Meanwhile, the researchers will find out the importance of E-learning tools' success in terms of male and female Malaysian student perspectives.

Gender and Virtual Learning

Literature suggests that gender represents critical part in realizing the variation in perceptions towards technology skills and attitudes on e-learning; numerous researches were conducted to explore impact of gender, year of study on student attitudes towards e-learning. Many studies confirmed that student's male owns more positively attitudes towards e learning than female students (Liaw & Huang, 2011). Egbo et al. (2011), concluded that female would accept information and communication technologies (ICTs) use more than males (Egbo et al. 2011).

Liaw and Huang (2011) their findings confirmed that male owns a positive attitude toward e-Learning than female. Furthermore, the researchers proposed that experiences and skills in computer is an important indicator on learners' motivation toward e-learning. Cheng as cited by Liaw and Huang (23011) believes that individual characteristics like gender, computer skills are not enough. Computer experience and skills played a primary factor in influencing on students' attitudes about e- learning, (Cheng, 2006) also, identified characteristics like age, gender, computer experience, technology acceptance, and individual learning styles as principal factors when investigating the students attitudes concerning e-learning processes.

Suri and Sharma (2013) clearly expressed that "no gender variations about the attitudes towards e-learning". These result fit with several new studies which exposed that the gap between male and female in this issue is narrowing (Bhattacherjee, 2008). Yacob et al. (2012) examined the familiarity of university students' in virtual learning, discussion of analysis were carried out on the students' perceptions regarding to gender, technology usage and the knowledge about online learning

implementation. Results shows that gender have a significant effect on attitudes towards e-learning (Dorup, 2004), 46% of males from first-year students prefer replacing "traditional learning" by using computer in learning, while only 22% of women support this result. Liaw and Huang (2011) explored the individual's attitudes and behaviors in utilizing virtual learning regarding to gender differences, computer skills. A result shows that male learners have additional positive attitudes towards e- learning than female students, and experience in computer usage is a significant index on learners' attitude toward virtual learning. According to Sebnmen (2015), the mean score of female attitude toward e-learning is higher than those of the male are; difference between the mean scores not found to be statistically significant. Gender did not significantly affect student's attitudes towards virtual learning did not significantly affected by gender. Dhiman et al. (2014), mentioned that male and female students own a high attitude towards e-learning although female students have slightly higher attitude towards e-learning than their male counterpart. This finding is consistent with work of Liaw et al. (2011) who found that postgraduate students have high positive attitude towards e-learning. These results is supported by the work of (Paris, 2004; Colley, 2003) but not support by the work of (Bhubaneswari & Padmanaban, 2012) who found that male and female students possess different attitude towards e-learning.

Challenges of Virtual Teaching and Learning Process during COVID-19 pandemic

The course preparation might involve, for example, learning a new software application to convey a concept more effectively or students may express their learning efforts via text, audio or video and this may create many obstacles that students and lecturer must confront and overcome. Researchers such as Leary and Berger (2007) revealed that the challenge of virtual learning is the amount of time required to develop and maintain an e-learning course. Virtual learning is costly to access information because it requires an internet connection, computers and other devices for communication (Noe, 2014). To facilitate in the virtual learning context is a challenge as Educause (2003) recommends including the following: computer experience, computer ownership, technical problems and time management. The study conducted by Drent and Meelissan (2008) notes that students often complain about their lack of knowledge of ICT and state that lecturers provide little support in that area. Selim (2007) identified the following as factors that impact on e-learning; lectures' attitudes and teaching styles, student motivation, student technical competency, student-student interaction, ease of access to the technology, infrastructure reliability and lack of support at the postsecondary level.

However, Becker and Jokrivita (2007) found the following factors as prohibitive to the effective use of technology or ICT:

(a) some older lecturers were prone to teach using traditional means;
(b) novice lecturers with limited training were less likely to use the technology;
(c) a lack of commitment to a constructivist pedagogy;
(d) a lack of available professional development; and
(e) a low level of contact between teachers and students who have little experience using technology.

Mohammed et al (2012) reveal that faculty members' acceptance of technology, undoubtedly, plays also a key role in optimal operation of Learning Management Systems (LMS) in higher education. Their ready acceptance of such a system would lead to an increase in usage and motivate students in their subjects to use LMS (Al-Busaidi & Al-Shihi 2010). This means that, in the context of education, even if the government and relevant ministries initiate various technology programmes, its successful uptake will greatly depend on the lecturers who deploy the technology in their tuition (Mahmud, 2006). Nasser et al. (2011) examine LMS usage among students as a metric and objective measure. Therefore the attitudes toward the LMS behaviour can be determined by both manipulative (such as interest, skills or knowledge) and non-manipulative factors (e.g. lack of internet access), hindering students' full use of the ICT system. Therefore the implementation and the designing of LMS has to accommodate the users and administrators who can help to ease usability. On the other hand, Al Infande (2013) argue that online learning sometimes forces students to not finish their studies because of anonymity which is associated with the platforms, for example if they are alone and get stark it is easy for them to give up.

Role of Lecturers in Virtual Learning

Lecturers, especially in tertiary institutions under review, are the key role players of virtual learning because they are there to promote online interaction with the use of Learning Management System (LMS). Singh et al. (2005) are of the view that the dynamic nature of the information technology industry, in combination with evolving e-learning technologies, has created a problem for lecturers in higher education because they have to do everything to encourage students to support the initiative. Sometimes students' success can be achieved simply by preventing them from withdrawing from virtual learning programmes (Serwatka, 2002). Therefore, lecturers influence on students' perceptions can play a very important role in motivating virtual learning. The enthusiastic lecturers employ virtual learning by using the modern social networks such as Facebook, WhatsApp, Skype. etc, which allow instant messaging. It is a common fact that students like or prefer the social networks because they are user-friendly. Volery (2000) argues that lecturers in networked learning environments as obtained in the two tertiary institutions under review, modify their courses as they go along, meaning the longer a course is taught in a particular format the more effective it is. Many suggest that rather than changing the role of the lecturer, the lecturer will gradually disappear completely with the rise of improved virtual learning technologies and methodologies. Maintaining that technical expertise on its own is not of great value unless lecturers conceive effective ways to utilize it (Volery, 2000).

Lecturers will always play a key role in the effective delivery of virtual learning initiatives, as it is the lecturer not the technology that facilitates the students' learning experience. Wilson (2001) suggests that three characteristics of the lecturer will control the degree of learning viz-a-viz; attitude towards technology, teaching style and the control of technology. It is true that fighting against the negative attitude of students in utilizing virtual learning can be promoted by the lecturers' influence. Lecturers must design activities, social interactions or problem-solving situations that allow students to practice the processes for applying course content. Wagner et al. (2008) argue that the lecturers or instructors may be motivated to use virtual learning in their courses for a variety of reasons. Lecturers should be very concerned about the acceptance of virtual learning tools among their students. Researchers such as Mahmod et al. (2005) and Lee et al. (2005) have found that perceived usefulness and perceived enjoyment are very important for the adoption of virtual earning applications by students. In order to increase perceived usefulness and enjoyment, lecturers should vary the types of content, create fun, provide immediate feedback and encourage interaction to increase acceptance.

Statement of Problem

The Implementation of virtual learning is not limited to crisis situations such as the current pandemic, it has been suggested as a substitute for face-to-face learning (Stacev et al. 2004). Also, virtual education, which is recognized as an online education method, is suitable for the 21st century educational environment to facilitate two-way Interaction, participation in learning class achievement, and levels of satisfaction similar to that of face-to-face classes (Jeong, 2010). Effective online learning must consider various factors such as speed, student-teacher ratio, pedagogy, online teacher role, online student role, online communication synchronization, online assessment role, and feedback sources. However, due to the current classroom design it is only a temporary solution for emergency distance teaching occasioned by COVID-19. Because emergency distance teaching was operated for a time without a planned classroom design unlike existing online learning, both students and teachers had difficulty adapting to it. It is pertinent that institutions operating virtual learning should consider support that can be easily used, that are effective, and that addresses various factors of virtual learning. Although face-to-face classes have been recognized as a form of learning today, it is necessary to prepare for education using a distance system due to unexpected changes in the environment that may occur in the future issues such as infectious diseases, war, regional conflicts, amongst others can hinder conventional face-to-face instruction, and remote teaching must be carried out in collaboration with other entities to resolve the problem. Therefore, the aim of this study is to explore virtual learning during COVID-19 era with special emphasis on gender awareness level and inherent challenges with regards to the teaching and learning of Business Education in Delta State tertiary institutions.

Research Questions

The following research questions were raised to guide the investigation

1. What is the percentage of gender awareness on the benefit of virtual learning during COVID-19 era in tertiary institutions in Delta State?
2. What are the challenges faced in the application of virtual teaching and learning during COVID-19 era by Business Education students in tertiary institutions in Delta State?

RESEARCH METHOD

The descriptive survey research design was adopted for this study. The entire Business Education students from 200 level to 400 level in two tertiary institutions (Delta State University, Abraka and University of Delta, Agbor) constituted the population studied. These students were mostly involved in virtual learning during COVID-19 pandemic lockdown in the respective institutions. The sample for this study comprised one hundred and eighteen (118) Business Education students from Delta State University, Abraka and University of Delta, Agbor respectively. The simple random sampling method was employed in selecting the students. This sampling method was employed because of the unavailability of all students in the Business Education Department and school at the same time; hence those available were randomly selected for this investigation. Also, this number represented 30% of the entire students who were involved in the Virtual/Online learning/E-learning in Business Education during the period under review. The instrument used in this study was a researcher developed questionnaire titled – "Students' Virtual Learning Awareness Level Questionnaire" (SVLALQ). The construction of the instrument was based on information gathered from the literatures reviewed. The face and content procedure was adopted for the validation of the instrument. For the collection of data, the researcher personally administer the copies of the questionnaire to the respondents (students) from both institutions, assisted by two students. Percentage, mean and standard deviation were used to answer the research questions.

Presentation of Results

Research Question One

What is the percentage of gender awareness on the benefit of virtual learning during COVID-19 era in tertiary institutions in Delta State? Result is presented in Table 1

Table 1: Percentage of Male and Female students' awareness of the benefits of virtual learning during COVID-19 era

S/N	Items	Male Students			Female Students		
		N	%	RMK	N	%	RMK
1	Students can easily read, view or listen to online academic programmes through their cell phones, Mps, and other Internet facilities	77	65	LP	41	34	VSP
2	Students can use it to attempt online assignments with instructions and guides from learning platforms	66	55	SP	52	44	SP
3	The various interactive tools of Virtual learning can cater for students' individual learning styles	45	38	VSP	73	61	LP
4	It contains hyperlinks information that shows students sites to navigate and read in order to gain in depth course knowledge	59	50	SP	59	50	SP
5	It has user comments that enable students to compare different viewpoints from users	38	32	VSP	80	67	LP
6	It foster students understanding of the interrelationships of students worldwide	77	65	LP	41	34	VSP
7	It does not provide a forum for students to copy assignments from other countries and submit as their own	54	45	SP	64	54	SP
8	It provides students with access to online lecture notes, sample exams and quizzes in their learning fields	70	59	SP	48	40	VSP

9	It allows students to learn at their own pace within and out of school	65	55	SP	53	44	SP
10	It provides academic knowledge in such a fashion that students feel they have no control over the way they learn	70	59	SP	48	40	VSP
11	It provides access to open learning environment for criticizing and ridiculing students' contributions	71	60	SP	47	39	VSP

Key: RMK = Remark; VLP = Very Large Percentage, LP = Large Percentage, SP = Small Percentage, VSP = Very Small Percentage

Table 1 reveals that measures students' awareness of the benefit of virtual learning indicated that items 1, 6 has a Large Percentage of male students who agree to its benefits, while the female students agree to its benefits with a Large Percentage in items 3 and 5 respectively. The male students' perception of the awareness of the benefit of virtual learning in the era under review show that there was a Small Percentage of awareness on item 2, 4, 7, 8, 9, 10, and 11; while the female students' was on items 2, 4, 7, and 9. There was also a very Small Percentage on items 3 and 5 for the male students and items 1, 6, 8, 10 and 11 for the female students. The implication here is that most of the students – male and female, are not aware of the benefits inherent in virtual learning, hence a negative responses. This was so as almost all the students rated the items as either Small Percentage or Very Small Percentage, giving credence to the fact that they do not know of the inherent benefit of virtual learning employed by the institution during COVID-19 era.

Research Question Two

What are the challenges faced in the application of virtual teaching and learning during COVID-19 era by Business Education students in tertiary institutions in Delta State? This question sought to find out the challenges faced in the employment of virtual learning during the era under review in the institutions under review. Result is presented in Table 2

Table 2: Mean and Standard Deviation of challenges faced by Business Education students during COVID-19 Era

S/N	Items	No	Rating Scale				$\bar{X}$	SD	RMK
			SD	A	D	SD			
1	Lack of technical know-how on the part of the teachers and students is a major challenge encountered in the teaching learning process	118	97	112	49	62	2.71	1.60	Accepted
2	It is costly and time consuming in addition to poor power supply	118	111	130	64	48	2.99	1.72	Accepted
3	Problem with slow learners grasping the content in real time is a challenge encountered	118	107	121	54	56	2.86	1.69	Accepted
4	The virtual learning creates room for flexibility during the online education	118	131	110	45	47	2.82	1.67	Accepted
5	The major and most taunting problem is Network and internet connectivity problems	118	86	118	69	40	2.65	1.62	Accepted
	Grand Mean						**2.81**	**1.66**	

Table 2 revealed that Business Education students agreed to the fact that they faced challenges in the virtual teaching and learning process during the era of COVID-19 in tertiary institutions in Delta State. This is reflected in the acceptance rate of the students with a mean above the benchmark of 2.50 for acceptance of the respective statements. Students agreed to all the items from item 1-5 with a mean

of 2.71, 2.99, 2.86, 2.82 and 2.65 respectively. The implication here is that Business Education students in the institutions under review faced some challenges in grasping with the introduction of virtual learning during the era of COVID-19 pandemic due to its sudden nature.

Discussion of Findings

The findings of the study have shown that the percentage of students who were aware of the benefits of virtual learning was small. This suggests a general low extent of students' awareness of the benefits of virtual learning. Specifically, out of the stated items, a majority of it indicated small to low percentage awareness of the benefit from both male and female students. This finding disagrees with the study of Fini (2008) who found that virtual learning is considered by students as being beneficial.

Findings revealed that Business Education students encounter challenges in the application of virtual teaching process during the era under review. This was due to the novel nature of the teaching process in Nigeria and tertiary institutions in Delta State in particular. This study agrees with the study conducted by Drent and Meelissan (2008) who noted that students often complain about their lack of knowledge of ICT and state that lecturers provide little support in that area. Also, Al Infande (2013) argue that online learning sometimes forces students to not finish their studies because of anonymity which is associated with the platforms, for example if they are alone and get stark it is easy for them to give up.

CONCLUSION

COVID-19 pandemic serves as an eye opener in that it makes for various adjustment in the way of life and doing things globally and education sector is not an exception. Its presence in the world necessitated the adjustment of every facets of human endeavour, including education which has changed from the conventional face-to-face learning to e- or virtual learning with the use technologies. Virtual learning has emerged as a useful source for promoting learning and preparing students to participate in a global economy. This study found out that students in this study were aware of the virtual learning, not aware of the inherent benefits when applied to education and they acknowledged the presence of challenges in coping with virtual learning. Moreover, the extent of awareness of the constituents and benefits of virtual learning of Business Education students differs. Therefore the study concludes that, there are fundamental implications for tertiary Business Education students if this awareness level, gender gap in the benefits of virtual learning and challenges discovered in this study with regards to virtual learning, are not bridged. The question remains on how to mitigate these observable issues and device a solution that would make more students aware of the virtual learning platform, make it gender friendly to reap its benefits and curb the inherent challenges for teaching and learning sake.

RECOMMENDATIONS

The following recommendations have been drawn on the study that:

i. School authorities should institutionalize the use of virtual learning, even after the passage of COVID-19 as its benefits outweighs its disadvantages to the teaching learning process.
ii. Students should be made to undertake task and assignment via the virtual means with a bid to bridge the gender divide noticed from this study.
iii. Government should make available facilities that supports the use of virtual learning in a bid to ease the weight on students as well as their guardians

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