Students' Perception on the Use of Virtual Learning Services in Tertiary Institutions in Gombe State

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ABSTRACT

This study ascertained the Students' Perception of the Use of Virtual Learning Services in Education in Tertiary Institutions in Gombe State. Two research questions and two hypotheses guided the study. A descriptive survey design was adopted. The population comprised 350 final years and 515 penultimate students in five tertiary institutions in Gombe State. A sample size of 250 students was selected for the study using a simple random sampling technique. A structured and validated questionnaire on a four-point rating scale containing 48 items was used for data collection. Data collected were analyzed using mean andstandard deviation to answer the research questions while a t-test was used to test the hypotheses at a 0.05 level of significance. The analysis was carried out using SPSS version 23.0. Findings revealed that students sometimes use virtual learning services in learning, but virtual learning services were not adequately available in tertiary institutions. Students' competency in internet usage was fair and that virtual learning service delivery is constrained by a lot of factors. Therefore, it was recommended among others that, Administrators of tertiary institutions in collaboration with the private sector should provide more virtual learning resources to tertiary institutions so as to facilitate the training of students in skills needed to use virtual learning services in the process of learning.

INTRODUCTION

The 21st century has witnessed the advancement of virtual learning technologies, especially of electronic learning. Electronic facilities in teaching and learning have become one of the most important and widely discussed issues in contemporary educational policy. In developed countries, learning is made easier as a result of easy accessibility to virtual learning devices such as computers, internet service websites, blogs,and video/text chats. Facebook, Twitter, email, video/audio podcasts, and other electronic devices.

In Nigeria, tertiary institutions were originally established to provide quality high education that facilitates the creation of new knowledge, innovation, and technologies for the overall individuals' socio-economic development and also for national well-being and integration. Regardless of its type or stage, the bottom line in all quality education is the production of functional citizens imbued with relevant knowledge, values, attitudes, and skills to make them useful to themselves and have the capacity to contribute meaningfully to the well-being of their society. The prime objective of every quality education process, therefore, is to ensure the acquisition of appropriate and relevant knowledge, skills, competencies, values,and attitudes by those who patronize these schemes.

The tertiary system in Nigeria today seems to be a far cry from this humane ideal of the founding fathers as it has generally been ill-equipped and tended to become characterized by a dwindling appetite for reading, an unfavorable attitude to learning, and poor research orientation (Asuquo, 2015). This unfortunate state of things to some extent can partly be blamed on the process that delivers instruction and the mode ofacquiring knowledge and skills in most tertiary institutions in Nigeria which have over the years remained basically stagnant, archaic, and comparatively obsolete with its likely effect of the producing largely illiterate, half-baked and less competent graduates has gradually become the norm (Asuquo & Eyo, 2017).

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This is, however, happening at a time when education is increasingly becoming recognized globally by all well-meaning societies as a veritable channel through which every society seeks to prepare its young for responsive, productive, and prosperous adult living. Education in such climes encompasses amongst others; a sound or solid foundation of literacy, numeracy, lifelong learning, equal opportunity, personal fulfillment, quality of life enrichment, social cohesion, critical thinking, and social skills – all of which make for responsible citizenship (Asuquo, 2017).

The emergence and prevalence of new technologies in our society today which have to some extent affected our lives, daily living, and life activities in tremendous ways seem to be a veritable option. For the past two decades or more, electronic devices and their systems have practically influenced all facets of life, including our values, beliefs, culture, religion, and total way of life. The effects of these devices and their accompanying systems are quite discernable in all functional sectors of Nigerian society, namely, commerce and industry, manufacturing processes, and social and educational systems. While enlightened societies across the globe are adopting these new technologies to solve the challenges of life that confront them and adapting their educational systems in response to the exigencies of the new devices, Nigeria is yet to fully embrace them. Virtual learning resources are a powerful tool that could be harnessed and used to enhanceand encourage the teaching and learning process in tertiary institutions. They should be accepted, applied,and kept abreast within all areas of our teaching and learning endeavours. More so as the world strives to meet development goals with increasing recognition of the potential of virtual learning resources to meet growing educational challenges. Therefore, the application of virtual learning resources within the contextof teaching and learning process in education service delivery has become doubly necessary especially in Nigeria today where the emphasis is being placed on technological development.

Ozioma and Offordile (2011) stated that educators are able to fashion a focused and relevant assignment for discussion between students and teachers, and among students through virtual learning devices. Abioye (2010) maintained that virtual learning devices such as the web, internet, multimedia, computer, projectorand television provide easy access to quality learning materials and make reasonable and responsiblecontributions to the learning process. Virtual learning services, processes, and applications include web- based learning, computer-based training, virtual classroom opportunities, and digital collaborations. Content is delivered via the internet, intranet/extranet, video or audio tape, satellite TV, CD ROM etc (Wikipedia). It can be self-paced or instructor-led and includes media in the form of text, image, animation, streamingvideo, and audio. Furthermore, the importance of virtual learning services in curriculum implementation is recognized by the FGN (2014), which it stated that the government shall provide facilities and necessary infrastructure for the promotion of virtual learning. Nwokike (2010) opined that virtual learning services are done through the use of computers and network-enabled transfer of knowledge and skills with reference to individual experience and practice. The computer can be used for localized, distant, or digital learningwhich involves changing from a system of education delivery to a digital system of education delivery.

Virtual learning, according to Kassa and Baiungwa (2013) as opposed to distance learning is a term that is used to refer to all ICT technologies, networks, the internet, and other forms of electronic media that can be used to enhance teaching and learning so as to transfer knowledge and skills. Therefore, virtual learning resources are an inclusive term that describes educational technology that electronically or technologically supports learning and teaching (Parks, 2013). The developments in internet and multimedia technologies are the basic enablers of virtual learning, with consulting, content, technologies, services, and support being identified as the five key sectors of the virtual learning industry (European Commission, 2000). In learning and education, it involves the use of modern technologies such as computers, digital technology, networked digital device (e.g., the internet), and associated software and courseware.

Regardless of the educational level or stage**,** virtual learning resources can be adopted, used, or applied in education for effective counselling skills, teaching, and learning of undergraduate**s** in Nigeria's tertiary

institutions. The advantage of these resources is that they are learner-centered, learner-controlled, and self-paced education processes where learners have authority over their learning environment; thereby allowing them to work at their pace and convenience (Eke, 2011). Additionally, it is in line with the paradigm shift from teacher-centredness to learner-centredness (Kassa & Balunywa, 2013). The extent to which virtual learning resources assist or replace other learning and teaching approaches is varied ranging on a continuum from none to fully online distance learning (Bates and Poole, 2013). Kozma (2005) observed that virtual learning is now perceived as a principal driver of economic development and social change, worldwide. It offers the potential to restructure organizations, promote collaboration, increasethe democratic participation of citizens, and improvethe transparency and responsiveness of governmental agencies. It also makes education and health care more widely available, fosters a culture of creativity, and enhances the social integration of individuals with people of different abilities and cultural backgrounds. Farrel and Shafika (2007) also noted that there are widespread beliefs that virtual learning can be an important tool to introduce and sustain education reform efforts in Africa. These advantages notwithstanding, if the facilities are not available, adequate, or current, it is almost doubtful that their potential benefits can be felt. Similarly, if the available resources are not utilized, it is also impossible to harvest any meaningful benefits.

Other variables of the present study that have been focused on in earlier research include the awareness of the nature and scope, value, impact, and effective methods of information and their perception of Literacy skills instructions. The emphasis has been on the need to focus on the use of an integrated approach in all aspects of education with respect to new technologies, strategies, and organizations. Okpechi, Denwigwe, Asuquo, Abuo, and Unimna (2018) have expressed the fear that virtual learning resources may be available in the library and identified in the bibliography of the library as relevant to one's subject of interest, but the user may not be aware or let alone able to use them. The author went further to suggest that the more aware students are, and accessible information resources are the more likely they are to be used. This connotes that awareness of the availability and access to the resources are critical determinants of their usability. In particular, and as usual in the case ofthe introduction of new schemes or innovations, students may find it difficult to migrate from the traditional learning mode to the use of new e-learning resources (Asuquo, 2017). Clearly then, different people from different backgrounds exhibit different attitudes to certain things, issues, and objects especially when it has to do with being receptive to change. Nwaoku (2005) stated that attitudes that define awareness, usability, and accessibility have cognitive and mental components made up of concepts and beliefs. He emphasized that in Rivers State where he undertook his study, accessibility to e-learning resources was insignificant in public schools but a significant factor in private schools.

Internet competencies are essential for success in the business world, especially in education. These competencies are useful tools for students to utilize and they need to be integrated into the curricula at all levels of students education. Murray and Blyth (2011) affirmed that internet competency is also referred toas computer literacy which involves the ability of students to use computers at an adequate level for creation, communication, and collaboration in a literate society. They also posited that it entails using sub-dimensions such as knowledge of general computing, spreadsheets, databases, email/internet, and presentation software. The utilization of these computer devices does not only depend on the student'sability and skills but the devices have to be available and accessible to the students for use. Internet competency is considered a collection of skills pertaining to the use of basic information in an internet- computer-based environment as well as the knowledge that relates to the legal and ethical issuesand risks of ICT usage (Truyen & Desle, 2009).

Masood, Khan, and Waheed, (2010) posited that the availability of computers in the teaching-learning process can result in students' ability to rapidly and effectively retrieve, analyze, share, and store large volumes of information and ideas. Internet usage should be appropriately employed in the learning process

to help transform traditional methods of learning, and improve students' efficiency and effectiveness in the classroom. Amenyedzi, Lartey, and Dzomeku (2011) stressed the need for students to leave school with a deeper understanding of school subjects' ICT skills. Oluwagbohunmi (2012) opined that keeping abreast with the changes however, demands not only sourcing for information but the ability to manipulate facilities that are necessary for embracing technology in this digital age. This therefore, necessitates that students be emboldened with the knowledge to be able to boot and use computers to type, save information retrieve, browse the internet, search for materials using appropriate search engines, download, upload, and use e-mail to share information to a whole lot of persons. Internet usage has the capability to prepare students for a highly skilled workforce that will move the nation to greater heights.

The importance of ICT in curriculum implementation is recognized in Nigeria by the FRN (2009), which it stated that the government shall provide facilities and necessary infrastructure for the promotion of ICT and virtual learning services. In a rapidly changing world of e-commerce, e-government, e-banking, and so on, it has become necessary for students and educational institutions to imbibe the culture of virtual learning, especially in education to have the capacity and capability to access and apply information in the global village. The virtual learning approach has the capacity to provide a higher interactive potential for users to develop their individual, intellectual, and creative abilities (Shavinina, 2011).

The application of virtual learning services in education provides productive teaching and learning to increase people's creative and intellectual resources especially in today's information society. It also serves as a platform for students to develop capacities for high quality learning and to increase their ability to innovate (Aduwa-Ogiegbaen & Iyamu, 2005). Karahocaa (2010) identified some competencies for effective adoption of virtual learning services by students in education as follows: The use of online assignment tools; The use of both synchronous communication tools (such as chatting) and asynchronous communicationtools (such as forums and journals); frequent availability of lecturers online for facilitation and the use of online journal for reflection and assessment.

Virtual learning in tertiary institutions facilitates students' self-learning, supports students' group work, and supports laboratory learning tools such as virtual labs (Michau, Gentil & Barrault, 2011). It is believed that virtual learning services in education among tertiary institution students in Nigeria provide the opportunity for them to effectively do their work such as creating visual presentations, presenting written work, and researching topics.

Oduma (2013) likened virtual learning to utilities like water and electricity which play a major role in education in tertiary institutions in Nigeria and has impacted the quality and quantity of teaching andlearning in vocational and technical education courses as well as research in educational methodology to initiate a new era in education. Virtual learning as a digital tool of ICT has strengthened teaching andlearning as it provides powerful resources and services for students thereby enabling them to meet their educational needs, It also allows for networking among students and teachers to facilitate the exchange of ideas and improve opportunities for connecting tertiary institutions to the world as learning is expanded beyond the classroom, so real-life context can be established (Dotimi & Hamilton-Ekeke, 2013). Etim, Akpan, and Ibok (2013) defined virtual learning as the interconnection of the system of subsystems of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data or information. Virtual learning content is delivered via the internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM.

Nweke (2013) carried out a study on appraisal of the level of availability and utilization of ICT facilities in teaching OTM in southeastern polytechnics in Nigeria. The study adopted a survey design. Five research questions and two null hypotheses guided the study. The population comprised all 88 OTM lecturers in the

six institutions studying office technology and management in the south eastern polytechnics. Data was analyzed using mean and standard deviation or the research questions while the t-test was used for testing the hypotheses. The results showed that ICT for implementation of OTM programme in polytechnics of southeastern states in Nigeria are available and utilized at low extent. It also showed that gender do not affect OTM lecturers on the extent of computer facilities utilization.

Aixia and Wang (2011) investigated the various virtual learning services and critical factors affecting learners' satisfaction in virtual learning environment at technical/ vocational schools in China. One thousand students from twenty technical /vocational schools made up the population of the study. Survey design was adopted for the study. Six research questions and six null hypotheses were formulated and tested. Analysis of co-variance was used for data analysis. The findings indicated that the perception of virtual learning services by students is positively influenced by its flexibility in knowledge management, time management, and widening access to information and communication technology (ICTs).

Several related empirical studies have been carried out on students' adoption of virtual learning services in the learning process. Yacob (2012) conducted a study on the awareness and use of virtual learning services that involved one hundred and fifty students from TATI University College in Malaysia, four research questions and four null hypotheses were formulated and tested at 0.05 level of significance. Survey design was adopted for the study and multiple regression analysis used to analyze the data collected on thestudents' perception in relation to gender, level of study, faculty, technology usage and awareness of e- learning implementation. The results showed that male and female students have significant awareness and approach towards e-learning services in education at TATIUC.

Hamilto-Ekeke and Mbachu (2015) carried out a study on the availability of virtual learning facilities and their usage by students in government-owned universities in Rivers State. The study adopted a surveydesign, three research questions, and three null hypotheses to guide the study. The population of the study comprised all 158 final-year students in the department of technical and science education. A structured questionnaire with 33 items was constructed for the study. The results showed that virtual learning services are always not adequately available for students' usage and that the few e-learning services available are not fully utilized by students.

Mehra and Omidian (2011) examined factors that predict students' ability and perception to internet services at the Khuzestan province Iran. Five research questions and five null hypotheses were formulated and tested at 0.05 alpha level. The study adopted survey design. Seven hundred and fifty students from ten tertiary institutions formed the population of the study. Analysis of variance was used for data analysis. The results showed that there were five factors that can be used for modeling students' ability and perception to internet services in Iranian schools. These factors are ability towards virtual learning services, perceived usefulness of virtual learning, perceived ease of virtual learning use, pressure to use virtual learning and availability of resources needed to use virtual learning facilities. The study showed a relationship with the current study with respect to ability towards virtual learning (internet), perceived usefulness of virtual learning resources and pressure to use virtual learning resources, but differ slightly with the availability of resources needed to use virtual learning facilities and location.

Atsumbe, Raymond, Enoch, and Duhu (2012) conducted a study on students' awareness and utilization of virtual learning infrastructure at the federal university of technology, Minna. Four research questions and four null hypotheses guided the study. The population of the study was made up of 382 students and 182 lecturers from the institution. The study adopted a survey method and a questionnaire constructed with 42 items. The results showed virtual learning services are not adequate in the university for teaching and learning and that lecturers and students have computers and laptops but do not use them in the teaching- learning process.

Orike, Iyalla and Okereke (2017) conducted a study on competency of business education students in ICT for learning in tertiary institutions in Rivers State. The population of the study comprised of all final year business education students from the two selected institutions. Survey design was adopted for the study. A researcher's questionnaire was used for data collection. Three research questions and three null hypotheses guided the study. Data were analyzed using the mean and standard deviation for research questions while the t-test statistical tool was used for testing hypotheses. The results showed business education students utilize some ICT tools while others were not utilized for learning. It also revealed that high cost ofmaintenance, lack of ICT facilities were factors challenging the usage of ICT for learning by business education students.

STATEMENT OF THE PROBLEM

Tertiary institutions in the country are adding online learning programs to meet the needs of the growing number of students seeking the convenience of virtual learning services and to remain competitive in the rapidly changing market for educational services. Virtual learning service presents an opportunity to enhance learning and to create environments where students and teachers can share knowledge. There appears to be inappropriate utilization of electronic devices for educational purposes by counsellor educators to students which results to watching of pornographic and very horrible films, defrauding people via the internet and among other negative actions. Also there is the problem of difficulties with practical development and implementation of e-learning programs, insufficient virtual learning infrastructure at institutional levels which in most cases hinder the adoption and integration of virtual learning services for educational purposes. It is against this backdrop that the study investigated the students' Perceptions of the use of Virtual Learning Services In Tertiary Institutions In Gombe State.

Purpose of the Study

The purpose of the study will be to ascertain the Students' Perception Use of Virtual Learning Services in Counselling Education in Tertiary Institutions in Gombe State. Specifically, the study tends to:

1. Ascertain the availability of various virtual learning services available to students in tertiary institutions in Gombe State.
2. Determine how often students use virtual learning services in learning in tertiary institutions in Gombe State.

Research Questions

The following research questions guided the study:

1. What are the various virtual learning services available to students in tertiary institutions in Gombe State?
2. How often do students use virtual learning services in learning in tertiary institutions in Gombe State?

Hypotheses

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

- There is no significant difference in the mean ratings of university and colleges of education students regarding various virtual learning services available to students in tertiary institutions in Gombe State.
- Male and female students do not differ significantly in their mean ratings regarding the various virtual learning services available to students in tertiary institutions in Gombe State.

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METHODOLOGY

Research Design

The design for this study was descriptive survey design. According to Creswell (2009), survey provides a quantitative or numeric description of trends, attitudes, or perception of a population by studying a sample population which is essential for the achievement of a study. Survey design was considered suitable for this study by the researcher since the study sought to collect data from tertiary institution students and obtain their views in relation to the use of virtual learning services in education in tertiary institutions.

Population of the Study

The population of this study consisted of all the350 final year and 515 penultimate students studying educational courses in the five tertiary institutions in the area of the study. This figure was supplied by the Heads of Department of education from the five tertiary institutions in Gombe State.

Sample and Sampling Technique

A simple random sampling technique was adopted in selecting a total of 250 education students from the five tertiary institutions for this study to obtain their responses on the use of virtual learning services in educational departments. This number were comprised 110males and 140females. Fifty students were drawn from each of the selected tertiary institutions thereby bringing the total number of students to 250. Out of this number, 50 students were drawn from the university while 200 were drawn from colleges of education.

Instrument for Data Collection

The instrument for data collection for this study was a structured questionnaire titled “perception of students on the adoption of virtual learning services in education in tertiary (QPOSOAOE) developed by the researcher based on the reviewed literature and the research questions guiding the study. The questionnaire is divided into two sections -A and B. Section A of the questionnaire was designed to collect information on personal details of the respondents such as gender, type of institution and level of study. Section B is subdivided into clusters B1- B4. Cluster- B1 has 10items on various virtual learning services available in education in tertiary institutions. Cluster- B2 has 13 items on the use of virtual learning services by students in learning in education in tertiary institutions. Cluster- B3 has 10 items on students’ competency in the use of internet in education in tertiary institutions. Cluster- B4 has 15 items eliciting opinions on the challenges faced with the use of virtual learning services in preparing students for the world of work in education in tertiary institutions in Gombe State. The questionnaire will be structured on a modified four-point ratingscale with response category as “strongly agree”, “agree”, “disagree” and “strongly disagree”, For clustersB1 and B4, while cluster B2 has response category as Very Often” Often” Fairly often” and Rarely”. B3has response category as Very competent” Competent” Fairly competent” and not competent”.

Reliability of the Instrument

The reliability of the instrument was established using 20 education students in tertiary institutions in Bauchi State who were not part of the population of the study. Data from the test were analyzed using Cronbach Alpha which yielded coefficient values of 0.87, 0.80, 0.68 and 0.84 for cluster B1 to B4 respectively. Overall, coefficient value of 0.79 was obtained for the entire instrument. This value was considered high enough for the instrument to be reliable based on the recommendation of Olayiwola (2007) that if the coefficient is positive and high (0.60), then it is reliable.

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Method of Data Collection

The researcher administered copies of the instrument on the respondents with the help of two research assistants who were briefed by the researcher concerning the purpose of the research, response pattern and subject of the study. The researcher and the research assistants used one week to distribute the instrument to respondents and another one week for the retrieval of the instrument during which reminders were sent through bulk short messages and telephone calls.

Method of Data Analysis

The data collected for this study were analyzed using the descriptive statistics of mean and standard deviation to answer the research questions. The standard deviation was used to ascertain the homogeneity or otherwise of the respondents' views. The real limit of numbers below was used for item-by-item decision and for the clusters.

Inferential statistics of t-test was used to test the null hypotheses at 0.05 level of significance. In testing the null hypotheses, when p-value is less than or equal to 0.05 ($P \leq 0.05$), the null hypothesis was rejected otherwise, the null hypothesis was not rejected.

ANALYSIS OF RESEARCH QUESTIONS

Research Question 1

What are the various virtual learning services available to students in school of education in tertiaryinstitutions in Gombe State?

Data collected in respect to this research question were analyzed and the results are presented in Table 1.

Table 1 Respondents' mean ratings and standard deviations on various virtual learning services available to students in school of education in tertiary institutions N= 242

S/N	Items on available Virtual learning services	X	SD	Remarks
3	digital library for learning	2.67	0.47	Agreed
4	Provision of new versions of software	2.37	0.66	Disagreed
5	internet facilities for teaching/learning	2.42	0.63	Disagreed
6	Active involvement of virtual learning services in all school curriculum	2.37	0.70	Disagreed
7	Provision virtual learning services teachers for students by school management	2.52	0.50	Agreed
8	Use of virtual learning facilities in internal communication	2.70	0.64	Agreed
9	Take home assignments in computer lessons	2.52	0.81	Agreed
10	I have computer lessons on the timetable	2.90	0.63	Agreed
11	Greater access to virtual learning facilities by students	2.52	0.67	Agreed
12	Audio tapes are provided for learning	2.55	0.59	Agreed
	Cluster Mean	**2.32**		**Disagreed**

Data in Table 1show that out of 10 items listed on availability of virtual learning services, studentsdisagreed that items4, 5 and 6 are available to them with mean scores ranging from 2.37 to 2.42 while they agreed that the remaining seven items are available. The cluster mean score of 2.32 shows that on the whole, students in tertiary institutions in Gombe State disagreed that these virtual learning services are available for them. The standard deviations for all the items are within 0.47 to 0.81. This shows that the respondents are not wide apart in their ratings.

Research Question 2

How often do students use virtual learning services in learning in tertiary institutions in Gombe State?

Data collected in respect to this research question were analyzed and the results are presented in Table 2.

Table 2 Respondents' mean ratings and standard deviations on the use of virtual learning services in learning in tertiary institutions in Gombe State N = 242

S/N	Items on use of virtual learning services	X	SD	Remarks
13	I access the internet in search of information	2.37	0.49	Sometimes
14	I make use of electronic board for learning	2.45	0.78	Sometimes
15	I use e-mails for sending and receiving messages in the learning process	2.50	0.50	Often
16	I make use of computer systems for processing data	2.37	0.49	Sometimes
17	I make use of CD ROM as supplementary material	1.87	0.75	Sometimes
18	I belong to online conferencing and study groups, to share information	2.25	0.77	Sometimes
19	I purchase lecture notes stored in CD ROMS	1.52	0.64	Sometimes
20	I make use of Twitter, Whatsapp etc to receive and send information	2.87	0.46	Often
21	I make use of digital library for learning	2.47	0.55	Sometimes
22	I use personal laptop, modem, flash drives and discs for learning	2.27	0.55	Sometimes
23	I make use of web cam in learning	2.12	0.85	Sometimes
24	I make use of multimedia projectors	2.25	0.63	Sometimes
25	I use online internet computer for learning	2.45	0.50	Sometimes
	Cluster mean	**2.29**		**Sometimes**

Data in Table 2shows that out of 13 items listed on the use of virtual learning services in learning, respondents indicated that they often use items 15 and 20 in learning with mean scores ranging between 2.50 to 2.87, while they sometimes use the remaining 11 items with mean scores ranging from 1.52 to 2.47. The cluster mean score of 2.29 shows that overall, students in tertiary institutions in Gombe State sometimes use virtual learning services in learning. The standard deviations for all the items are within 0.46 to 0.85. This shows that the respondents are not wide apart in their ratings.

RESULT OF TEST OF HYPOTHESES

Hypothesis 1

There is no significant difference in the mean ratings of university and colleges of education students regarding various virtual learning services available to students in tertiary institutions in Gombe State. Data obtained in respect of the first hypothesis were analyzed and presented in Table 3.

Table 3 t-test summary of the analysis of university and College of education students regarding various virtual learning services available in their schools

Type of Tertiary Institution	**N**	**X**	**SD**	**df**	**Sig.**	**P-value**	**Decision**
University	50	29.383	3.012	240	0.82	0.05	Not Significant
College of Education	192	30.13	2.69				

Table 3 shows that the significant value of 0. 82 is greater than the p -value of 0.05 (0.82> 0.05) at 240 degrees of freedom. This means that there is no significant difference in the mean ratings of university and colleges of education students regarding various virtual learning services available in tertiary institutions in Gombe State. Therefore, the null hypothesis is accepted.

Hypothesis 2

Male and female students do not differ significantly in their mean ratings regarding various virtual learning services available to students in tertiary institutions in Gombe State.

Data obtained in respect of the second hypothesis were analyzed and presented in Table 4.

Table 4 t-test summary of analysis of male and female students regarding various virtual learning services available

Gender	N	x̄	SD	df	Sig.	P-value	Decision
Male	109	29.5	22.65	240	0.51	0.05	Not Significant
Female	133	30.00	3.09				

Table 4 shows that the significant value of 0. 51 is greater than the p -value of 0.05 (0.51> 0.05) at 240 degrees of freedom. This means that male and female students did not differ significantly in their mean ratings on various forms of virtual learning services available in tertiary institutions in Gombe State.Therefore, the null hypothesis is accepted.

SUMMARY OF FINDINGS

From the results of the analysis presented, the findings of the study are summarized as follows:

1. Virtual learning services are not adequately available to students in tertiary institutions in Gombe State.
2. Type of institution and gender did not significantly influence students mean ratings in this regard.

DISCUSSION OF THE FINDINGS

Use of Virtual Learning Services in learning

The findings of the study showed that students sometimes used virtual learning services in learning in tertiary institutions in Gombe State. The findings of this study are in line with Hamilton-Ekeke and Mbachu (2015) which showed that virtual learning services are sometimes used by undergraduate students for enhancing learning. Hamilton-Ekeke and Mbachu stated that while virtual learning resources are not adequately available in tertiary institutions in Nigeria, few available ones are not often used by these students. This supports the earlier findings of Atsumbe, Raymond, Enoch and Duhu (2012) and Shahadat, Muhbub and Clement (2012) that undergraduate students do not use virtual learning services for learning as expected. In contrast, Bupo (2015) revealed that students often utilize virtual learning in the educational process; this can only be achieved when the facilities are available.

The fact that students in tertiary institutions in the area of the study do not very often or often use these virtual learning services listed in learning is surprising considering the benefits accruable from effective use of virtual learning resources in the educational process. According to Atsumbeet al. (2015),

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virtual learning services can help to promote new methods of learning (teaching and learning), and to improve communication, problem-solving and lifelong learning. Vogot (2013) stated that the use of virtual learning services by undergraduate students can help to enrich learning content, enhance wider access to the information resource, and improve the quality of their academic performance. Further, Wodi (2009) reported that students' usage level of virtual learning is low when compared to their counterparts in developed countries such as Japan and China. Wodi pointed out that students in tertiary institutions must use virtual learning services more for them to effectively appreciate the benefit of programmed instruction. However, the findings of this study disagree with that of Yacob (2012) which revealed that students' usageof virtual learning services for learning is high.

Additionally, the test of the first hypothesis revealed that type of institution did not significantly influence the mean ratings of students regarding the usage of virtual learning services for instruction in tertiary institutions. This supports the finding of Ogedebe (2012) which reported that students' usage of virtual learning services for learning in various tertiary institutions in Nigeria is still low. Similarly, the testof the second hypothesis disclosed that gender did not significantly influence male and female students'mean ratings regarding the usage of virtual learning services for instruction in tertiary institutions. This finding disagrees with that of Sanni (2009) who reported that gender difference agrees with virtual learning services in learning. Liaw and Huang (2011) also found that male students had more positive virtuallearning perceptions and usage behaviour than their female counterparts.

Implications of the Study

The findings of this study have some educational implications for curriculum review, ICT infrastructural upgrade, human capital development and instructional strategies. The findings revealed that students sometimes use virtual learning services in learning. This implies that students are not taking advantage of the benefits of virtual learning services to improve their acquisition of knowledge, skills, attitudes, and competencies needed to be gainfully employed either as employees or self-employed. It also implies that tertiary institutions in Gombe State are lagging in the implementation of virtual learning services in instructional delivery.

The findings of the study also disclosed that virtual learning services were not sufficiently available in the tertiary institutions covered. This implies thatthe delivery of programme in equipping students with relevant virtual learning competencies for employment or self-reliance is falling below expectations as lecturers do not have these new technologies in their departments and do not integrate them for instructional delivery. It also implies that government and the private sectors are not doing enough in the area of supplying virtual learning resources to various departments in tertiary institutions in Gombe State.

CONCLUSIONS

This study discovered that the use of virtual learning services by undergraduate students was low due to insufficient availability of virtual learning services in tertiary institutions programmes as well as students' fair competencies in using virtual learning resources such as the internet for learning. It also revealed that students acknowledged constraints to the effective use of virtual learning services in the teaching and learning process. In light of these findings, the researcher concludes that there are significant challenges to virtual learning service delivery in tertiary institutions in Gombe State. Therefore, to realize the full potential of virtual learning services in these institutions, more still need to be done by stakeholders toensure that virtual learning service is available and utilized by students to improve their learning.

RECOMMENDATIONS

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

1. The Federal and State Government should take an urgent step in providing technical resources and improving internet connection for ensuring uninterrupted online education in Gombe State to fulfill the education needs of tertiary institutions level of students.
2. Administrators of tertiary institutions in collaboration with the private sector should provide more virtual learning resources to various institutions in the State so as to facilitate the training of studentsin skills needed to use virtual learning services equipment while still in school so as to have the knowledge of the needed skills involved in learning through virtual learning.
3. Government should provide fund to all the local governments in the state so as to enable them to acquire more virtual learning resources for various students in their localities to facilitate teaching and learning.
4. The government of Nigeria should provide digital libraries with server for storage, retrieval, uploading and downloading of information in all the rural and township areas for easy teaching assessment by the students.
5. The federal government and the state government should employ technologists and technicians to take care of internet facilities and equipment in all local government areas various states in order to carry out daily routine repairs and maintenance of these services.

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