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PROCEEDINGS BOOK

EDITOR
Assist. Prof. Dr. Gül GÖRMEZ

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Scientific Development and Innovative Approach

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IMPACT OF E-LEARNING ON ACADEMIC PERFORMANCE OF UNDERGRADUATE STUDENTS IN FEDERAL UNIVERSITY OF TECHNOLOGY MINNA, NIGER STATE, NIGERIA

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ABSTRACT

This study examined the impact of e-learning on academic performance of undergraduate students in federal university of technology Minna, Niger State, Nigeria. The study adopted a descriptive survey design. Four research questions guided the study. The population of the study was 250 students of 200L from school of science and technology education. The study adopted a simple random sampling technique, A sample size of 152 was selected from the total population using (Krejie & Morgan, 1970) table for determining sample size from a given population. The instrument for data collections was structured questionnaire titled "E-learning and Academic Performance of Undergraduate Student Survey Questionnaire" (ELAPUSSQ). The instrument was validated by three experts, two from the department of science education and one from of Educational technology all from Fut Minna. Data collected were used to determine the internal consistency and reliability of the instrument using Cronbach alpha techniques. An overall reliability coefficient of 0.89 was established. Mean and standard deviation were used for data analysis. The findings of the study revealed that e-learning has positive impact on academic performance of undergraduate students in federal university of technology Minna, Niger State. The findings of the study revealed challenges militating against the use of e-learning to enhance academic performance of undergraduate students in federal university of technology Minna, Niger State. Based on the findings, the study recommend among others that government should ensure a maximum standard set for institutions to get computer and internet facilities to enhance effective e-learning process in FutMinna and other higher institutions in Nigeria.

Keywords: e-learning, Challenges, Education, Technology, Students, ICT

INTRODUCTION

Technology is such a big part of the world of which we live. Many of the jobs that did not require technology use in years past do require the use of technology today. Many homes have computers than in years past and increasing numbers of people know how to use them. According to Shama, (2020) Technology is being used by children and adults on a daily basis by way of web surfing, texting, social networking, interactive games, and in more ways. We are an evolving technological society and in many ways have become dependent on its use. Thus, the use of technology and teaching students how to use it has become a high priority in the public schools. Today, there is a common focus on raising student achievement while integrating technology as a tool. Electronic learning (E-learning) is a broad term used interchangeably with other terms, such as online education and distance learning. Most university students nowadays also have access to the internet as their university provides internet access, and usually, there are internet cafes within a walking distance from the university's campus, catering for students' needs (Oye, 2019). Some also have internet access within their home as they subscribe to an internet service provider. University students are mostly independent in their learning as lecturers usually give out lecture notes, and further information is left for students to discover on their own, as it is not way learning process which is practiced in the primary and secondary school system. The learning process at the university level is at a two-way level, lecturers share their knowledge and students give their opinions or thoughts in return which is a topic in class discussions Ngulube, (2018) and Egoigwe *et al (2020)*

Coates, (2019) assert that the most significant development in the use of Information Technology (IT) at universities in the last decade has been the adoption of e-learning platform to support the teaching and learning process. It is usually implemented on a large scale across an entire university, faculty or school and then adopted by lecturers, who use it in a variety of ways to support course management and students' learning. E-learning platform is often described interchangeably as Virtual Learning Environments (VLE), Knowledge Management Systems (KMS) and Content Management Systems (CMS) (Moore, 2018). They provide students and lecturers with a set of tools for improving the learning process and its management and function as a support in traditional classroom education as well as in distance education. Ngulube (2018) opined that the 21st century is characterized by the technological imperative that has resulted in the universal deployment of e-learning in higher education. McPherson (2019) clarified that e-learning has become a widely accepted and regularly used mode of learning in higher education. The emergence of e-learning is influenced by the evolving learning environment and the demand for education that is not located on a college campus (Oye 2019). Electronic learning technologies are becoming increasingly popular in tertiary institutions as they are used for tutoring, managing courses, providing simulations, enriching existing courses, programming and problem solving. With the rapid advancements in the internet, e-learning technologies are available and functional and would require (NOJEST 2022) Creativity of the teachers to access and use them in instructional delivery. The rapid growth in e-learning is also largely influenced by the ability to integrate elements such as images, videos, audio and graphics which have proved to be a more reliable way of keeping learners engaged when compared to traditional learning (Sharma 2020). Likewise, e-learning technology gained popularity amongst learners and teachers because of its cost-effectiveness, flexibility of access, and elimination of distance barriers for globally distributed learners, the need for just-in-time training, allowance for individual differences and permission for alternative pedagogies like simulation, experiential, interactivity, and self-paced learning.

Teaching in an e-learning environment can contribute to the ability to teach, the ability to learn and most important to bridge between two main components in the classroom, the teacher, and the learner. E-learning provides different environments for learners with dynamic, interactive, nonlinear access to a wide range of information such as texts, graphics, and animations as well as to self-directed learning in online communication (e-mail and forums). e-learning allows the integration of a wide range of resources, from chats and forums to online booklets, a variety of questions, collections of problems and exercises, lecture notes; including any kind of text-based or html formatted documents, multimedia resources such as graphics, video or audio (such as MP3 files), PowerPoint, or Flash-based applications and Java applets (Rubin, 2018). Moodle focuses on giving educators the best tools to manage and promote learning and allows teachers to organize, manage and deliver course materials. Consequently, these activities increase the interest of the students in their studies. However, the benefits of such systems cannot be realized if users are not aware of the resources or its capabilities. While the term "E-learning" has been thrown around quite a lot in recent years, many are still unaware of what it actually means and how it can help them achieve success in both their professional and personal lives (Epignosis, 2019).

Stakeholders (Teachers and Learners) that have been used to on-site classroom instruction would need to adapt to online teaching and learning which they need proper guidance on how to go about it. The use of E-learning technologies in education and training has been a key priority in most European countries for decades, but progress has been as anticipated because the technique and mode of E-learning is not clearly instituted in most learning institutions. Students in Europe accept E-learning as an alternative to the gold-standard face-to-face instruction that they have practiced for so long (Gordon 2019). Students in Africa on the other hand still prefer the face-to-face instruction as they do not have ample access to internet which is a major facility needed for E-learning (Nkongolo, 2019). There are considerable differences of 'e-maturity' within and between countries, and between schools within countries because some learning institutions have no e-library for access with other virtual libraries around the globe (Eurydice, 2021).

Academic performance is the rate at which a student performs academically. Different factors affect academic performance with aiding it while some do not. As a result, learners/students may connect to classrooms from anywhere and get lectures while being anonymous to their peers and teachers/lecturers. This breakthrough falls under the purview of electronic learning (e-learning) and e-learning technology. Since the 1990s, e-Learning has been gaining traction in education. The advent of computer and internet technologies and the use of smartphones and tablets in recent years have greatly facilitated the adoption of e-learning. To parallel with these developments, researchers and educators have begun to use e-learning as a teaching tool, and the importance of e-learning has been recognized by all educational stakeholders during the pandemic (Zalat *et al.,* 2021). With the rapid development and growth of technological advancement, researchers have begun using new teaching methods and techniques in education. The numerous benefits of technology have encouraged instructors and teachers to adapt and use the new advances in education to deliver course content to students at every level (Niyazova, *et al*., 2022). With this aspect, many colleges and universities worldwide have adopted e-learning systems and face-to-face classes to support them in increasing the level of education presented to students (Bossman & Agyei, 2022).

In the last three years, e-learning has been widely adopted at all levels of education, especially in higher education, because of the emergence of the COVID-19 pandemic in the world (Alqahtani & Nadeem, 2021; Platonova et al., 2022).

Therefore, most universities have been compelled to adopt learning management and e-learning systems to supplement traditional classroom instruction (Bossman & Agyei, 2022; Liu & Yu, 2022). Specifically, the outbreak of COVID-19 has accelerated the use of e-learning in higher education (Xiberta et al., 2022). Today technology is a tool used to remove geographical obstacles and facilitates everybody to learn anytime and anywhere without the presence of the lecturer. The main purpose of e-learning is to increase accessibility of education and reducing costs and time as well as improving student's academic performance. Therefore, this study investigates the impact of e-learning on the academic performance of undergraduate students in federal university of technology Minna, Niger State.

Statement of the Problem

The inevitability of education is increasing by the day because of increasing pressure to catch up with the developed countries when it comes to global competitiveness. Earlier than the beginning of e-learning, a lot of people who wanted to get hold of institutions of higher learning degree had to compete for the few places that were offered by the other institutions. Though e-learning has been widely accepted and has aided in the construction of virtual institutions in the majority of Western nations, only a few universities in Nigeria entirely conduct their academic operations using e-learning. There is an already existing concern on the adoption of e-learning and student academic performance in diverse areas. For instance, in the study of Manya, Vishnu, and Gayathri (2018), the results found that e-learning has a positive influence on the academic performance of undergraduate students. Kumar and Bajpai (2019) reported that to improve motivational effectiveness and academic achievement, higher education should consider aiming to develop e-learning strategies that encourage greater engagement and also take into consideration the diverse learning styles found among the student.

Notwithstanding, Federal University of technology, Minna (FUTMinna) has made e-learning as part of its instructional mode of lecture delivery since the year 2022 which virtually all the 100L courses were made to be online. With this reformation, the record of results of academic performance of science education students on general studies GST110 provided by the E-Centre FUTMinna in 2024 shows that 188 students enrolled in 2021 through traditional method of instruction where 9.57% scored A, 23.4% scored - B, 40.43% scored – C, 15.43% scored – D, 7.45% scored – E, 3.72% scored -F. Whereas, 147 students enrolled in 2022 Via e-learning strategies where 13.61% scored scores A, 31.97% scored - B, 34.01% scored - C, seimpacts of e-learning on academic performance of undergraduate's students in Federal University of Technology Minna, Niger State.

Purpose of the Study

The Purpose of this study primarily seeks to focus on the impact of e-learning on undergraduate students' academic performance in federal university of technology Minna. Other objectives of this study includes:-

1. To find out the impact of e-learning on undergraduate students' academic performance in federal university of technology Minna.
2. To find out the extent prior computer skills play in e-learning undergraduate students' academic performance in federal university of technology Minna.
3. To find out challenges militating against the use of e-learning in enhancing academic performance of undergraduate students in in federal university of technology Minna.
4. To determine strategies to improve e-learning academic performance of undergraduate students in federal university of technology Minna.

Research Questions

The following research questions will guide this study.

a) What are the impacts of e-learning on academic performance of undergraduate students in federal university of technology Minna?
b) What extent do prior computer skills play in e-learning undergraduate students' academic performance in federal university of technology Minna?
c) What are the challenges militating against the use of e-learning to enhance academic performance of undergraduate students in federal university of technology Minna?
d) What are the strategies to improve e- learning academic performance of undergraduate students in federal university of technology Minna?

Methodology.

The descriptive survey research design with the use of a structured questionnaire was used to collect the required information from the respondents. The survey research was adopted because survey design generally can be used to effectively investigate problems in realistic settings. Shama (2020) described survey research as that which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. The target population for this study comprises of 160 male and 90 female making a total of 250 students in 200 level of Science Education, Industrial technology education, Educational technology and Library and Information Science department in school of science and technology education (SSTE), Federal University of Technology Minna, Niger state. Sample size of one hundred and fifty two (152) students out of two hundred and fifty (250) students were selected. The selection of the sample size of students were done using (Krejie & Morgan, 1970) table for determining sample size from a given population. A structured questionnaire titled "E-learning and Academic Performance of Undergraduate Student Survey Questionnaire" (ELAPUSSQ) was adopted and was the main instrument for data collection. The questionnaire consisted of two sections, section A and B. Section A comprised of questions relating to biography of the respondents i.e. (age range, sex, class e.tc) that were clear and not personal, while Section B consisted of item statement which are derived from the research question. A five point liker scale item would be developed using a decision rule of 3.0 which consist of the elements; SA- Strongly Agree, A- Agree, N- Neutral, D- Disagree, SD- Strongly Disagree and VH-Very High, H – High, M – Moderate, L – Low, VL– Very Low.

The instruments were collected after being administered in order to enable the researcher and data analyst to analyze responses and make valid decisions. The questionnaires used for this study were face-validated and thoroughly scrutinized by the supervisor and three other experts in SSTE for clarity, precision, and comprehension. The corrections and observations of these experts will be incorporated in the final instrument. The reliability of the instrument was determined using a test-retest technique. A sample of the questionnaire will be served in a school outside the research population. The result that would be obtained must be relatively consistent and of high reliability. In order to assess the reliability of the questionnaire, a pilot study was conducted involving 30 students from 100L Students who are currently undergoing E- Learning within the school (SSTE). Since these students are not part of the study, their participation was particularly valuable.

The pilot study served as a means to evaluate the questionnaire's clarity, readability, appropriateness and adequacy. The scores collected during the pilot testing were then subjected to analysis using Cronbach's alpha. The result of the analysis revealed a reliability coefficient of 0.89 for the E-learning and Academic Performance of Undergraduate Student Survey Questionnaire" (ELAPUSSQ)

The researcher collected an introductory letter from the Head of the Department (HOD) which was used to obtain permission from the various selected Departments, the questionnaire was administered to the respondents through a collaborative effort between the researcher and a well-informed research assistants. The respondents complete the questionnaire and was collected at the spot by the researcher and the research assistant. The data collected will be analyzed using descriptive statistics mean and standard deviation using the Statistical Package for Social Science (SPSS) version 26. The information obtained from the data will be used to answer research questions. For decision rule, the cut-off – point mean is 3.0. The responses that had a mean score of 3.0 and above were accepted while those with a mean score below 3.0 were rejected.

Results

1.1 Analysis of demographic data of respondents.

Table 1.1.1. Distribution of respondents by Department, gender and Age

Department	Frequency	Percentage (%)
Science Education	69	45.4
Industrial Technology Education	30	19.7
Educational Technology	31	20.4
Library information Science	22	14.5
Total	**152**	**100**

Source: Field Survey, 2024

Table 1.1.1. Above shows the distribution of respondents by department. The table revealed the distribution of respondents, thus, 45.4% of the respondents are from science education, 19.7% of the respondents are from industrial technology education, 20.4% of the respondents are from educational technology while 14.5% of the respondents are from library information science.

Table 1.1.2 Respondents Age

Age Range	Frequency	Percentage (%)
18-21	71	46.7
22-25	65	42.8
26-29	12	7.9
30 Above	4	2.6
Total	**152**	**100**

Source: Field Survey, 2024.

The distribution of respondents based on their age range shows that, 46.7% of the respondents falls within 18-21 years, 42.8% falls within 22-25 years, 7.9% falls within 26-29 years while 2.6% are 30 and above years.

Table 1.1.3 Gender of the Respondents

Gender	Frequency	Percentage (%)
Male	108	71.1
Female	44	28.9
Total	**152**	**100**

Source: Field Survey, 2024.

The table shows the distribution of respondents based on gender. It revealed that 71.1% of the respondents are male while 28.9% of the respondents are female.

2.2 Analysis of Research Questions

2.2 Research Question One: What are the impacts of e-learning on academic performance of undergraduate students in federal university of technology Minna?

Table 2.2 Mean (X) rating of respondents on the impacts of e-learning on academic performance of undergraduate students in federal university of technology Minna?

S/No. Items	N	Mean	Std. Deviation	Decision
E-learning improves student's academic Performance	152	4.05	1.05	Accepted
E-learning has removed obstacles and facilitates everybody to learn anytime and anywhere	152	4.30	0.80	Accepted
E-learning reduces cost and saves time	152	4.20	0.98	Accepted
E-learning increases accessibility to education	152	4.21	0.93	Accepted
Students who participated in e-learning achieves better grades than students who studied conventional approach	152	3.26	1.27	Accepted

Source: Field Survey, 2024 *Criterion Mean* = 3.0

Table 2.2 above shows the impacts of e-learning on academic performance of undergraduate students in federal university of technology Minna. The criterion mean of 3.0 was used to decide either to accept or reject with the statement of the questionnaire. Item 1 on the table scored a mean of 4.05 greater than the criterion mean with the decision that E-learning improves student's academic performance. Item 2 on the table scored a mean of 4.30 greater than the criterion mean.

This implies the respondents E-learning has removed obstacles and facilitates everybody to learn anytime and anywhere. Item 3 on the table scored a mean of 4.20 greater than the criterion mean. The decision of the respondents is E-learning reduces cost and saves time. Item 4 and 5 scored means of 4.21 and 3.26 greater than the criterion mean. The respondents agreed that E-learning increases accessibility to education and Students who participated in e-learning achieves better grades than students who studied conventional approach..

2.2.1 Research Questions Two: What extent do prior computer skills play in e-learning students' academic performance in federal university of technology Minna?

Table 2.2.1. Mean (x) rating of respondents on the extent prior computer skills play in e-learning students' academic performance in federal university of technology Minna?

S/No. Items	N	Mean	Std. Deviation	Decision
To what extent do Prior computer skills help you develop confidence in the ability to use computers for academic purposes?	152	4.28	0.86	High Extent
To what extent do prior computer skills have helped you to better understand e- learning course materials?	152	4.13	1.06	High Extent
To what level do Prior computer skills contribute to your academic performance in e-learning?	152	3.84	0.99	High Extent
To what extent do Prior computer skills important for achieving academic success in e- learning.	152	3.93	0.95	High Extent
. To what extent do students with prior computer skills are comfortable with using online learning platforms than those without prior skills.	152	4.0	1.10	HighExtent

Source: Field Survey, 2024 *Criterion Mean* = 3.0

From table 2.2.1 above, it shows extent prior computer skills play in e-learning students' academic performance in federal university of technology Minna. Item 6 scored a mean of 4.28 greater than criterion mean of 3.0. The respondents agreed that Prior computer skills help students develop confidence in the ability to use computers for academic purposes. Item 7 scored a mean of 4.13 greater than criterion mean of 3.0. The decision is that prior computer skills have helped students to better understand e- learning course materials.. Item 8 on the table scored a mean of 3.84 above the criterion mean which shows that Prior computer skills contribute to students' academic performance in e-learning. Item 9 on the table scored a mean of 3.93 greater than the criterion mean. This implies that Prior computer skills is important for achieving academic success in e- learning. The item 10 scored a mean of 4.0 above the criterion mean of 3.0. This implies that students with prior computer skills are comfortable with using online learning platforms than those without prior skills. Table 4.3.2 indicates that the undergraduate students affirmed that prior computer skills play a very high extent in e-learning students' academic performance in federal university of technology Minna.

2.2.2 Research Question three: What are the challenges militating against the use of e-learning to enhance academic performance of undergraduate students in federal university of technology Minna?

Table 2.2.1 Mean (x) rating of respondents on the challenges militating against the use of e-learning to enhance academic performance of undergraduate students in federal university of technology Minna.

S/No.	Items	N	Mean	Std. Deviation	Decision
11	Insufficient number of computers and accessories	152	4.15	1.15	Accepted
12	Lack of electricity/power supply	152	3.80	1.14	Accepted
13	Lack of initiative by the universities to have strong internet services.	152	4.02	1.05	Accepted
14	Lack of qualified manpower and skills to teach ICT in the university.	152	3.74	1.27	Accepted
15	Poor ICT literacy skills on student	152	3.61	1.35	Accepted

Source: Field Survey, 2024 *Criterion Mean* = 3.0

Table **2.2.1** above shows the challenges militating against the use of e-learning to enhance academic performance of undergraduate students in federal university of technology Minna. Item 11 on the table scored a mean of 4.15 greater than criterion mean of 3.0. The respondents agreed that insufficient number of computers and accessories is a factor militating the use of e-learning in enhancing academic performance in FUTMinna. Item 12 scored a mean of 3.80 greater than criterion mean of 3.0. This implies that Lack of electricity/power supply is also a factor militating against in e-learning. Item 13 on the table scored a mean of 4.12 above the criterion mean which shows that Lack of initiative by the universities to have strong internet services is a challenge students faced in e-learning. Item 14 on the table scored a mean of 3.74 greater than the criterion mean. This implies that Lack of qualified manpower and skills to teach ICT in the university also militate against e-learning academic performance. The item 15 scored a mean of 3.61 above the criterion mean of 3.0. This implies that Poor ICT literacy skills on students is a great challenge militating against e-learning academic performance. The conclusion drawn from the table is that all the items listed above are challenges militating against the use of e-learning in enhance academic performance of undergraduate students in federal university of technology Minna.

2.2.2 Research Question Four: What are the strategies to improve e-learning Academic Performance of Undergraduate Students in Federal University of Technology Minna, Niger State?

Table 2.2.2 Mean (x) rating of respondents on the strategies to improve e-learning Academic Performance of Undergraduate Students in Federal University of Technology Minna, Niger State.

S/No.	Items	N	Mean	Std. Deviation	Decision
16.	Students to have positive attitude towards e-learning	152	4.36	0.80	Accepted
17.	University to adopt e-learning as compulsory requirement for all newly employed academic staff.	152	4.07	1.01	Accepted
18.	Academic lecturers to attend workshops and seminars on e-learning.	152	4.21	0.99	Accepted
19	University to sponsor academic staffs for further training on e-learning.	152	4.30	0.79	Accepted
20.	University to make sure that all e-learning facilities are in good condition and well maintained before lectures or examinations.	152	4.42	0.86	Accepted

Source: Field Survey, 2024 *Criterion Mean* = 3.0

Table **2.2.2** above shows the strategies to improve e-learning Academic Performance of Undergraduate Students in Federal University of Technology Minna, Niger State. Item 16 on the table scored a mean of 4.36 greater than criterion mean of 3.0. The respondents agreed that Students to have positive attitude towards e-learning improve students' academic performance. Item 17 scored a mean of 4.07 greater than criterion mean of 3.0. This implies that all the respondents agreed university to adopt e-learning as compulsory requirement for all newly employed academic staff to improve e-learning academic performance of students. Item 18 on the table scored a mean of 4.21 above the criterion mean which shows that respondents agreed Academic lecturers to attend workshops and seminars on e-learning in improve e- learning academic performance. Item 19 scored a mean of 4.30 greater than the criterion mean. This implies that University to sponsor academic staffs for further training on e-learning improves academic performance. The item 20 scored a mean of 4.42 above the criterion mean of 3.0. This implies that respondents agreed university to make sure that all e-learning facilities are in good condition and well maintained before lectures or examinations. The conclusion drawn from the table is that all the items listed above are strategies to improve e-learning Academic Performance of Undergraduate Students in Federal University of Technology Minna, Niger State.

2.3 Discussions of findings

The findings of the study revealed the positive impacts of e-learning on academic performance of undergraduate students in federal university of technology Minna, Niger State which include improving students' academic performance and increases accessibility of education among others. These finding are corroborated by Jimoh-Kadiri and Bupo (2011) who noted that e-learning improves student's academic performance; remove geographical obstacles and facilitates everybody to learn anytime and anywhere and increases accessibility of education; reduces the costs and time factors. The findings of the study revealed the challenges militating against the use of e-learning to enhance academic performance of undergraduate students in higher institutions in Nigeria.

This findings is in consonant with the findings of Ahmed, A. T. *et al.* (2021) who postulated some challenges militating against effective implementation of e-learning in higher institutions of higher learning which include: lack of computers, lack of qualified lecturers to teach ICT in higher institutions, lack of electricity/power supply, lack of internet or slow connectivity, lack of initiative by the universities to connect ICT, broken down computers, lack of finance and distributive capacity, lack of qualified academic lecturers and inadequate instructional materials in teaching and learning. The findings of the study also revealed strategies to improve academic performance of undergraduate students in federal university of technology Minna.

The findings of the study is in line with the findings of Sheng and Basaruddin (2017) who pointed out strategies to improve student's performance which the posited that for any students to achieve in academic environment such students must have a positive attitude towards e-learning, never skip classes and having competitive spirits and strong self-motivation; the university to provides motivational workshops/seminars that relate to time management, students to have technique of studying and problem solving skills; university to provide counselling session for undergraduate students; university to engage academic lecturers with appropriate qualification to meet teaching expectation; university to make e-learning a compulsory tasks for all newly employed academic staff; academic lecturers to attend workshop on teaching through e-learning; the university to send academic staffs for further training on e-learning; university to make ICT instructors/facilitators to be aware of self-commitment and responsibility towards teaching student with online facilities; university to comply with the accreditation requirements by having academic staff to tally with students admitted teaching ratio; university to make sure that all e-learning facilities are in good condition and well maintained before lectures or examinations.

2.4 Major findings of the study

1. The study indicates that **e**-learning has positive impacts on Academic Performance of Undergraduate Students in Federal University of Technology Minna, Niger State.
2. The study indicates that respondents affirmed that prior computer skills play a very high extent in e-learning students' academic performance in federal university of technology Minna, Niger State.
3. The study indicates that lack of electricity/power supply among others are challenges militating against the use of e-learning in enhance academic performance of undergraduate students in federal university of technology Minna.
4. The study indicates that University to make sure that all e-learning facilities are in good condition and well maintained before lectures or examinations among others are possible strategies to improve e-learning Academic Performance of Undergraduate Students in Federal University of Technology Minna, Niger State.

Conclusion

Conclusively, the study was carried out to examine the impacts of e-learning on academic performance of undergraduate students in federal university of technology Minna, Niger State, Nigeria, through the use of ICT facilities to improved undergraduate students learning process. The findings of the study result understandable revealed that e-learning assisted undergraduate studies to extensively advance academic performance, learning methods and self-improvement.

Recommendations

Based on the findings, the study also recommend among others that:

1. University administration should seriously consider ways of incorporating the use of ICT in teaching and learning in the institutions.
2. Regular training of undergraduate students with ICT facilities will go a long way to promote and strengthen their scientific and technical knowledge skills
3. Lack of manageable size should be considered during admission process into higher institutions, so as to maintain a reasonable number of lecturers/students ratios
4. There must be opportunity for in-service training of academic lecturers to be grounded enough in ICT skills and there is need for well- furnished computer laboratories with internet facilities and other ICT equipment's.
5. University should ensure that all e-learning facilities are in good condition and well maintained before lectures or examinations.
6. Government should ensure a maximum standard set for institutions to get computer and internet facilities to enhance effective e-learning process in FutMinna and other higher institutions in Nigeria.

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