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Students Perception of the Use of Technologies for Learning in National Open University of Nigeria (NOUN) Distance Education Programme

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ABSTRACT
In today's world, technology has become an indispensable tool because of its diverse use in all aspects of human endeavour especially in education industry. This paper investigated modern media technology skills of lecturers and effective assessment of learners using technology. The purpose was to give an insight into the opinion of students on the use of technologies by lecturers in National Open University of Nigeria (NOUN) distance education programme in Imo State learning centre. Three research questions and two hypotheses guided the study. A survey research design was adopted in conducting the study. Data were collected through the use of structured questionnaires administered to the respondents. A sample of 150 respondents was randomly selected from a population of 1500 students from the Owerri NOUN study centre. Findings reveal very low level availability and utilization of modern ICT in teaching and assessment with facilitators perceived as possessing moderate level of skills and competencies for the use of technology in instructional delivery and assessment. The paper recommends the provision of required learning technologies at the learning centre and training of facilitators in the use of modern resources in the wake of the Covid-19 pandemic which necessitated social distancing and encouraged virtual learning.
Keywords: Technology, distance education, students' perception, national open university

INTRODUCTION

The World population has reached 7.8 billion according to United Nations, Department of Economic and Social Affairs, Population Division (2017). Out of this figure, about 80% reside in the developing countries (Coast, 2002) of which Nigeria is one of them. As the population is increasing there is a need to find ways of improving efficiency and quality education delivery systems in developing countries. The nature of the "information age" and communication are changing rapidly. Technologies that were previously considered advanced are becoming common place and new technologies are continuously emerging. The Federal Republic of Nigeria (2013) visualizes education as a tool for national and personal development and as an inalienable right of its citizens. The provision of education for all in Nigeria is overwhelming, especially if the country's ever-growing population presently estimated to about 200

million is put into consideration and other pressing needs of its people. With the ever-growing population of the country, there is an ever-growing need for education which cannot be met by the use of the traditional face-to-face instructional delivery method (Okonkwo, 2012).

In response to the ever growing need for tertiary education in Nigeria, the National Open University of Nigeria (NOUN), was establish in July, 1983, by the then Federal Government of Nigeria by an Act of the National Assembly as the first distance learning tertiary institution in Nigeria. The establishment of distance education programmes is in conformity with section 40(a) of the National Policy on Education which states that: 'Maximum effort will be made to enable those who can benefit from higher education to be given access to it. Such access may be through universities or correspondence courses, or open universities, or part time and work study' (FRN, 2013).

Originally, the concept of Open University was birthed with the belief that communications technology could bring high-quality degree-level learning to people who had not had the opportunity to attend traditional campus universities (Overa, 2017). The National Open University of Nigeria (NOUN) is a Federal Government University which implies that it is approved by National Universities Commission (NUC) for running graduates, Masters and Ph.D. programmes. Presently, the National Open University of Nigeria has over four hundred thousand students and seventy centres nationwide (Oreva, 2017). Presently, the National Open University of Nigeria (NOUN) is Nigeria's only university dedicated to providing education through the use of distance instructional delivery methods.

However, the non-availability, lack of ICT skills and competencies, poor distribution of course materials, through the use of modern technologies which underpin instructional delivery at NOUN, may continue to constitute hindrances to the achievement of the university's vision and mission. The vision statement of the University is thus stated. "The National Open University of Nigeria is to be regarded as the foremost university providing highly accessible and enhanced quality education anchored by social justice, equity, equality, and national cohesion through a comprehensive reach that transcends all barriers." Its mission statement is "to provide functional, cost-effective, flexible learning, which adds lifelong value to quality education for all who seek knowledge" (NOUN, 2006, p. 4).

The United States Distance Learning Association (USDLA) defines distance education as: "A generic, all-inclusive term used to refer to the physical separation of teachers and learners. (2) [Distance Education, Distance Learning, Distributed Learning]. The application of information technology (and infrastructure) to educational and student-related activities linking teachers and students in differing places. (3) The student and instructor are physically separated by any distance. All communications are mediated by some type of electronic means in real or delayed time. Location is of no significance. (4) The organizational framework and process of providing instruction at a distance. Distance education takes place when a teacher and student(s) are physically separated, and technology (i.e., audio, video, and computers, print) is used to bridge the instructional gap. (5) The organizational framework and process of providing instruction at a distance. Distance education takes place when a teacher and student(s) are physically separated, and technology (i.e., voice, video, data, or print) is used to bridge the instructional gap" (Simonson, 2008).

Due to the technological advances of the recent past, a great deal of excitement and hope has been generated for the use of distance learning in education. Rapid advances in computer and telecommunications capabilities have made possible the development of learning modules that include elements such as video transmission, e-mail, the internet, and the World Wide Web. These modules can function either as components of the learning process or as the basis for instruction (Morrison, 2006). The progression of long distances learning from pen-pals, college correspondence courses, teleconferencing, over speaker phones, teleconferencing via modem, transporting still pictures along with interactive audio, to the latest technology of two-way, full audio, full video communication has implications for public education.

Technological advances have created a paradigm shift in distance education. No wonder, Morrison (2006) further states that telecommunications, software and the internet eliminate walls and boundaries. In addition, he states that an increasing number of students want and need non-traditional, flexible schedules. Distance education is becoming a common practice as evidenced by the number of universities

that offer distance education programs, the number of distance learning projects for primary and secondary education that are created or are currently in use. As distance learning continues to expand, educators must be ready to examine the issues generated by this paradigm shift.

Technology enables people to communicate with family, friends and colleagues around the world instantaneously, gain access to global libraries, information resources, and numerous other opportunities. Technology also brings an improvement in education delivery system in open and distance learning especially in National Open University of Nigeria hence technology is one of the driving forces of globalization. Technology encompasses the broad spectrum of communication technologies from, radio, film, television, press and telephone along with more participatory forms as theatre, video or storytelling. It also focuses on the electronic and of the spectrum such as e-mail, the internet, mobile phone and digital video, others include adobe connect, black board, canvas, and so on.

Apart from the awareness of the need for good basic education, the use of technology in National Open University of Nigeria (NOUN) has also been recognized for recurrent training in order to update, upgrade or reconvert qualification profiles, in order to maintain (or if possible to increase) the market value of the individual worker. In addition, only conventional higher education or tertiary institutions cannot support huge demands that will result from this awareness of the need for lifelong learning, open and distance learning through technology are seen, as the only growing need for further education. NOUN is Nigeria's only specialist provider of open and distance learning at the tertiary level. It is the country's largest tertiary institution in terms of student numbers, and it operates from the administrative headquarters in Lagos, Nigeria, with Study Centres spread throughout the country (Okonkwo, 2012). The need for the effective utilization of technology in National Open University of Nigeria (NOUN) can be felt in many dimensions.

Aspin and Chapman (2007) outline lifelong technologies such as assistive technology which access to informal and formal learning opportunities for individuals with disabilities may be dependent when low and high tech assistive technology. Web 2.0 – this has great potential to support lifelong learning endeavours, allowing for informal, just-in-time, day-to-day learning. In order to survive and thrive, organizations and individuals must be able to adjust, and enhance their knowledge and skills to meet evolving needs. Technologies not only play significant role in instructional delivery but also can play similar role in assessment of learning outcomes. Technology can play this role in two major ways:

Computer Assisted Assessment or Computer Aided Assessment (CAA) and Computer-Based Assessment (CBA). Computer-assisted assessment (CAA) connotes the usage of computers to manage or support the assessment process and evaluate students' assignments. It is mostly used for scoring multiple-choice questions and questions with short-answer responses using optical mark reader (OMR). On the other hand, Computer Based Assessment is usually made using a computer. Computer based assessment means the use of digital tools like laptops, tablets, and even smart phones for conducting assessment-related activity (Kuruvilla, 2018). The software for the electronic assessment include: Question mark Perception, Calibrand Marker, eMarking Assistant, Automated Analytic rubrics, WebPA, e-portfolios etc.

Questionmark Perception is an 'assessment management system' that allows the creation and delivery of various types of test - typically for use as part of an e-learning system. It can support 22 different types of question, although many of these are variations on the same thing (such as "Yes/No" and "True/False"), multiple choice and Likert scale etc. Questions are created either within Authoring Manager, a locally-installed package, or via a browser-based application, although the browser-based application only allows the creation of eight of the 22 question types supported by Authoring Manager. Questions are created independently of assessments and stored in a 'question bank'. Assessments are most often delivered through the Web browser, but Questionmark Perception also supports off-line tests, including a print/scan option where users mark their answers on a printed answer sheet that is then scanned in and automatically analysed/marked. Naturally, the print/scan option only supports certain question types. It can be integrated with a Learning Management System (LMS) which is a software application that manages all aspects of training delivery.

Calibrand Marker is an Internet or intranet based workflow application that allows a teacher to manage the progress of marking at all stages of the assessment process used primarily for essay and case-study

type testing. It plays a key role in the assessment process by allowing the user to manage the assessments online; assign tests to markers; award marks and comment on a candidate's answers; and refer results within a pre-determined range to committee members for ratification. It has the advantage of giving secure online access to managers, markers and the exam review board, reducing the time taken to send exam papers to the different stakeholder Cutting administration costs and Improving the security of the entire marking process

Markin is a Windows computer based electronic marking application which enables the teacher to mark assignments submitted by students electronically as document files and/or via email. This programme makes it possible for teachers to be able to mark and return these documents just as quickly and easily as they can mark work submitted on paper - and in some cases more quickly. The programme can import a student's text for marking by pasting from the clipboard, or directly from a document file. Once the text has been imported, Markin provides a comprehensive set of tools enabling the teacher to mark and annotate the text. After marking, Markin saves it as an XHTML document, in which the teacher's marks and annotations appear as coloured text. When the student opens this document in a web browser (such as Internet Explorer, Firefox, Safari or Chrome), they can click on the marks to reveal more detail about the nature of the teacher's annotation or comment. The programme can also export the marked document as a RTF file, which is more suitable for students who want to view it as a printout.

eMarking Assistant is an assessment software which helps graders and markers to create and use reusable comment banks, audio comments, do Google searches within Word environment, and provides other tools to help teachers grade papers using Microsoft Word. It also allows teachers to make and automated analytic eRubrics including criteria and standards which automatically re-scale, total and convert marks to grades

The Automated Analytic Rubrics software enables teachers to make reusable automated grading rubrics in Microsoft Word containing their own weighted assessment criteria (in rows) and performance standards with marks or percentage ranges (in columns) and then easily complete this rubric by clicking the cell for your assessment and pressing the F6 function key (or F12 key on some Macintosh computers) to highlight the cell, rescale and record the mark for each criterion. The F5 or F7 function keys will vary the mark down or up and F8 will total the marks and convert it to percentage and grade

WebPA is an online peer assessment system, or more specifically, a peer-moderated marking system. It is designed for teams of students doing group work, the outcome of which earns an overall group mark. Each student in a group grades their team-mates and their own performance. This grading is then used with the overall group mark to provide each student with an individual grade. The individual grade reflects the student's contribution to the group.

The traditional face to face instruction mode employed in normal classroom setting can no longer meet the increasing demands of education and this in fact has an adverse effect on quality and effectiveness of education. There are more students at all levels, there are greater distances within and between education complexes. With the increase in course content as well as curriculum, educators in Nigeria especially those entrusted with the responsibility of facilitating distance learning are now having the responsibility of applying today's technology to improve the effectiveness and quality of educational delivery. This is more so in the face of the Corona virus disease (COVID-19) which the world Health Organization has declared a pandemic ravaging the world which requires social distancing to curtail its spread. Teaching and assessment of outcomes should as a matter of fact be conducted in a manner that requires physical separation of the participants (teachers and learners). The need for mediated teaching and learning has become imperative.

Since the information age has brought about innovations that cannot but stay in the learning environment especially in distance learning environment, there is every need to effectively master the skills by learning facilitators and its application in the learning delivery and assessment. NOUN as a university operating open learning mode, it becomes difficult to effectively disseminate skills, competencies and knowledge needed for lifelong education without effective use of modern technologies since the learners are most often physically separated from the teachers. For these technologies to be effectively used in learning facilitation in these Open University study centres, they have to be available for use by the facilitators and

the learners with the facilitators possessing the requisite skills and competencies to employ them for learning facilitation.

This study therefore attempts to explore students' perception of the availability and use of these technologies in National Open University of Nigeria, extent of utilization and skills and competencies of facilitators in using same for instructional facilitation and learners' assessment.

Objectives of the Study

Specifically, the study was designed to achieve the following objectives.

1. To determine the available technologies for distance learning delivery at NOUN Owerri study centre.
2. To determine the extent to which modern technology for distance learning are used in learning and assessment of learners in the study centre.
3. To determine the extent to which facilitators in NOUN are skilled in use of the modern necessary information and communication technology in the delivery of learning in NOUN study centre.
4. Ascertain if there is gender difference in the perceived use of ICT in teaching and assessment by NOUN facilitators.

Research Questions

In line with the objectives of the survey, the following research questions were posed to guide the study:

1. What are the available technologies for distance education delivery at the NOUN study centre Owerri?
2. To what extent do lecturers in NOUN make use of modern technology for effective teaching and assessment of learners?
3. To what extent are lectures in NOUN skilled in using information and communication technology in teaching and assessment of learning outcomes?
4. Are there differences mean scores of facilitators on ICT use in teaching and assessment according to gender?

Hypothesis

Similarly, the following research hypotheses were postulated to guide the study

1. There is no statistically significant correlation between facilitators perceived ICT skill/competence and their perceived ICT use in teaching and assessment.
2. There is no statistically significant difference in facilitators' use of ICT in teaching and assessment according to gender.

METHODS

This study was a descriptive survey. The population was made up of all the 1500 students in NOUN learning centre in Imo state. A sample of 150 students representing 10 percent of the population was used. The selection of the sample from each department was randomly chosen through balloting. The actual numbers distributed to the departments are Arts/Social Science students = 50 education combined students = 50, science and technology students = 50. The total sample for the study was 150.

The instrument for data collection is Technology Availability Utilization and Skills Questionnaire (TAUSQ) developed by the researchers. The questionnaire was made up of two sections, section A focused on availability of distance education technologies for teaching, section B is concerned with items on utilization and competencies of lecturers in using these technologies. The respondents were expected to choose from available and not available to respond to section A of the instrument, they were expected to indicate their opinion on a Likert four type point Very Great Extent, Great Extent, Low Extent and Very Low Extent in respect of section B of the instrument. The 4-point Likert scale was thus scored Very Great Extent = 4, Great Extent = 3, Low Extent = 2 and Very Low Extent = 1.

The instrument was validated by a panel of experts in Educational Technology and Measurement and Evaluation. The test-retest method was used for the confirmation of the reliability of the instrument. Their responses were correlated using Spearman rank order correlation to obtain a correlation co-efficient of 0.80. This indicates a strong correlation between the two tests implying that the research instrument can reliably measure what it was designed to measure. One hundred and fifty of the questionnaires were administered on the respondents at the Owerri study centre. Research assistants assisted the researchers to

administer the questionnaires as well as assisted in the collection of same after completion. Out of the 150 copies of questionnaires administered, only 138 were returned and well filled out and were used for data analysis.

In answering research question one, technologies that received available response of 50 percent and above are seen as available in the study centre while a response below 50 percent are perceived as not available. In answering research questions 2 and 3, a mean of less than 1.33 is interpreted as low extent, 1.34 to 2.66 is interpreted as moderate extent while a mean of 2.67 and above is interpreted as high extent.

RESULTS

Availability of technologies for distance education at the NOUN study centre Owerri.

Table 1 presents data on the availability of required technologies for distance education for teaching and learning at the NOUN study centre in Owerri.

Table 1. Available technology for distance education teaching in at NOUN Owerri study centre.

S/N	Item	Available		Not available		Remark
		Resp.	%	Resp.	%	
1	Print media	138	100	0	0	Available
2	Radio Programme	9	6.5	129	93.5	Not Available
3	Audio Tapes	0	0	138	100	Not Available
4	Audio CD	138	100	0	0	Available
5	Television Programme	0	0	138	100	Not Available
6	Instructional e-mail	23	16.7	115	83.3	Not Available
7	Video Conferencing	0	0	138	100	Not Available
8	Audio Conferencing	0	0	138	100	Not Available
9	Internet enabled learning/E-learning	18	13	120	87	Not Available
10	Instructional computer programme	0	0	138	100	Not Available
11	Video CD	21	15.2	117	84.8	Not Available
12	Computer Assisted Assessment	0	0	138	100	Not Available
13	Computer Based Assessment	0	0	138	100	Not Available

Data presented in table 1 shows that out of the eleven modern technologies for teaching and assessment listed; only two of them received responses above 50 percent indicating availability. The technologies are print media and audio CD which received 100% response from the respondents. The remaining nine technologies were not available as the highest response to indicate availability of these technologies is 16.7% for instructional e-mail.

The availability and use of only printed materials at the Owerri study centre finds support in the works of Ajadi, Salawu and Adeoye (2008) who noted that print was the major media used in NOUN centres in Nigeria. Other technologies for delivery and assessment of learning in distance learning settings were not available. This result is at variance with Kolawale and Omolara (2010) whose findings revealed that institutional provision of video recordings, posters, charts, electronic databases, and email.

Extent facilitators/instructors in NOUN make use of modern technologies for effective teaching and assessment of learners

Table 2 presents data on the extent of use of ICT by facilitators/instructors at the NOUN study centre in Owerri.

Table 2. Extent of ICT use by facilitators for effective teaching and assessment in NOUN Owerri study centre

S/n	ICT use	N	Mean	Std. Deviation
1	Facilitators use digital resources in their Lessons	138	1.2174	.41397
2	Facilitators use Digital Video Camera for preparing videos for classroom presentation	138	1.0290	.16838
3	Facilitators use social networks to interact with us in the learning environment and their colleagues	138	1.5507	.61694
4	Facilitators use Interactive whiteboards in teaching during tutorials	138	1.0000	.00000
5	Facilitators use personal email to give assignment and receive same from students	138	1.2029	.40362
6	Facilitators use authoring environments to produce online material for their students	138	1.0362	.18755
7	Facilitators use presentation software in tutorial classes /lessons	138	1.0290	.16838
8	Use of the Internet for their professional learning	138	2.8768	.74924
9	Facilitators innovative ways of assessment using technology	138	1.0000	.00000
10	Facilitators use ICT applications to monitor, evaluate, and report on student achievement	138	1.1087	.31239
11	Facilitators use the computer to record grades, maintain student records, or to take students' attendance	138	1.7536	.67067
	Grand Mean	138	1.19275	

Data presented in table 2 shows that facilitators at the Owerri study centre of NOUN use ICT in teaching and assessment of learning outcomes to a low extent (Grand Mean =1.193). Out of 10 items relating to extent of use in the instrument, only 2 items received mean responses above low extent (1.33). The 2 items are facilitators use the computer to record grades, maintain student records, or to take students' attendance (mean = 1.75) and facilitators use social networks to interact with us in the learning environment and their colleagues (mean = 1.55). The remaining 8 items in the instrument received mean responses below (1.33) an indication of low extent of use of ICT in the learning environment at the study centre.

Extent facilitators/instructors in NOUN study centre are skilled in using information and communication technology in teaching and assessment of learning outcomes.

Data presented in table 3 shows that students of NOUN Owerri study centre perceive that their facilitators are skilled/competent in the use of ICT in teaching and assessment of learning outcomes to a moderate extent (Grand mean = 1.73).

Table 3: Extent facilitators are perceived skilled/competent in ICT use for effective teaching and assessment in NOUN Owerri study centre

S/n	Skill/Competence in ICT use	N	Mean	Std. Deviation
1	Use of the computer to record grades, maintain student records, or to take students' attendance	138	1.9493	.63156
2	Use of digital resources in their lessons	138	1.2464	.43247
3	Use of Digital Video Camera for preparing videos for classroom presentation	138	1.8841	.66258
4	Use of social networks to interact with us in the learning environment and their colleagues	138	2.6957	.72100
5	Use Interactive whiteboards in teaching during Tutorials	138	1.2174	.41397
6	Use of personal email to give assignment and receive same from my students	138	2.3261	.76572
7	Use of presentation software in our tutorial classes /lessons	138	1.5652	.56616
8	Use of the Internet for their professional learning	138	2.8768	.74924
9	Use of authoring environments to produce online material for their students	138	1.0942	.29317
10	Design innovative ways of assessment using technology	138	1.0290	.16838
11	Use of ICT applications to monitor, evaluate, and report on student achievement	138	1.1594	.36740
	Grand Mean	138	1.7277	

They perceive them most competent in using the Internet for their professional learning (mean = 2.877), and least competent in designing innovative ways of assessment using technology (mean = 1.03). This goes to suggest that the use of ICT in teaching and assessment at the NOUN study centre in Owerri is at the basic level.

Difference between the mean response of facilitators on ICT use in teaching and assessment according to gender

Table 4: Table of means of male and female facilitators on ICT use in teaching and assessment

	Gender of Respondents	N	Mean	Std. Deviation	Std. Error Mean
Total Facilitator Technology Use	Male	66	11.8333	1.23517	.15204
	Female	72	12.0139	1.27260	.14998

Result presented in table 4 indicates that there is a difference in the mean response of the facilitators on ICT use in teaching and assessment according to gender. Males (M = 11.83; SD = 1.235) females (M =

12.014; SD = 1.273) mean difference = 0.181, an indication that the females have a slightly higher mean scores than the males.

Hypothesis O_1

To test hypothesis 1, a one-way analysis of variance test was conducted.

Table 5: ANOVA table of facilitators' use of ICT in teaching and assessment

Total Facilitator Technology Use

	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	1.123	1	1.123	.713	.400	Fail to reject
Within Groups	214.153	136	1.575			
Total	215.275	137				

Table 5 shows the ANOVA table generated from the test. From the test, it can be observed that there was no statistically significant difference at the $p < .05$ level in facilitators' technology use scores according to gender: F (1, 136) = .713, p = .400. Based on this result, the researchers fail to reject the null hypothesis and therefore conclude that there is no significant difference in facilitators' ICT use according to gender.

Hypothesis O_2

Relationship between perceived facilitators ICT use and their ICT skills/competence

Table 6

Correlations

		Total Facilitators Skills/Competence	Total Facilitator Technology Use
Total Facilitators Skills/Competence	Pearson Correlation	1	-.020
	Sig. (2-tailed)		.813
	N	138	138
Total Facilitator Technology Use	Pearson Correlation	-.020	1
	Sig. (2-tailed)	.813	
	N	138	138

Data presented in table 6 shows that the relationship between perceived ICT use (as measured by the TFTU) and perceived facilitators skills/competence (as measured by the TFSC) was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was no statistically significant correlation between the two variables, $r = –.02$, n = 138, $p < .813$. Based on this result, the researchers fail to reject the null hypothesis and conclude that there is no statistically significant correlation between perceived ICT skills/competence of facilitators and their perceived ICT use in instruction and assessment.

DISCUSSION

The finding of this study revealed that modern technology devices and applications for operating distance learning in an Open University setup such as NOUN are not readily available. The only technologies adjudged available are print media and audio CD. Most technologies listed which are very much needed in modern day distance learning programmes are not available for use in the study centre. Interaction with

some of the students at the learning centre revealed that the modern technological electronic devices were not used in the learners' assessment. The only materials used in learners' assessment were study guide and modules. This situation does not support effective education in this period of Corona virus pandemic that individuals are expected to maintain social distancing to curtail the spread of the virus. With the non-availability of required technologies, it becomes pertinent that instructors at the various learning centres adopt the instructional values of social media in teaching and assessment which the learners are familiar with as recommended by Onwuagboke, Onwuagboke and Obialor (2021).

The extent facilitators at the study centre make use of modern technologies in teaching and assessment is low. The use of ICT in distance learning by instructors/facilitators is of great importance. Research has shown that distance learning satisfaction greatly depends on the faculty ability to integrate ICT in the course design and delivery, as well as establish effective interactions among all online course participants (Zoborova, Glazkova & Markova, 2017). This is not a healthy development in the face of the COVID-19 pandemic which requires limited physical contact especially in the learning environment. Cartwright (2004) describes the strategies which are effective in distance learning assessment include developing appropriate methods of feedback and reinforcement, optimizing content and pace, adapting to different student learning style using modern technologies which are relevant to the target evidence, supplement courseware with hardware materials. The Owerri study centre should embrace these technologies to guarantee the health of the participants and positive learning outcomes.

RECOMMENDATIONS

The following recommendations were made based on the findings of this study

1) Efforts should be made by the authorities if NOUN to ensure that facilities and qualified lecturers are provided at the study centres so that hands on brains on technology skills should be inculcated to the learner.

2) The use of modern technology devices in learners' assessment such as test, tutor marked assignment and examination should not be ignored.

3) National Open University of Nigeria (NOUN) should adopt multimedia approach where the centre cannot afford these media single handed, there should be collaborative effort in the procurement as well as training of the staff.

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