

## **Assessment Of The Adequacy, Suitability And Utilization Of Modern Instructional Materials At Centers For Educational Technology In Nigerian Colleges Of Education**

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**Abstract:** *This research set out to assess the adequacy, suitability and utilization of Modern Instructional Materials (MIM) in Colleges' Centre for Educational Technology (CCETs) in Nigerian Colleges of Education (NCOEs). The researcher tried to determine how effectively and efficiently these available IM were utilized by both lecturers and students at CCETs in teaching and learning process. The research was carried out using the National Commission for Colleges of Education (NCCE) minimum standard (Education) for awarding Nigerian Certificate of Education (NCE) as the basis for the assessment of these IM. The research design adopted for this study is the descriptive survey design. Seven COEs (3 federal and 4 states) were involved using random sampling techniques, Pilot study one and two were carried out in the North-West Zone of Nigeria. Two hundred and thirty four (234) lecturers and three hundred and seventy eight (378) students were involved. The data was collected by means of two questionnaires and observation schedule and were analyzed using simple percentage, means, standard deviation, and t-test. The results of the analysis showed that there was no significant difference between the mean scores of lecturers and students on the availability of IM in the federal and state COEs, and also these MIM were adequately available and fully utilized at CCETs by both lecturers and students. Finally, the research work was summarized; concluded and certain recommendations were made for Educational Technology courses' lecturers, prospective students and governments along with the suggestions for further researchers.*

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Date of Submission: 21-10-2018

Date of acceptance: 03-11-2018

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### **I. Introduction**

Every educational endeavor involves making value judgment. In passing such judgment, a systematic and scientific methodology is involved to determine the value, worth and merit of such an educational endeavor more than anything else. Instructional or educational resources and facilities are very necessary and vital for the utmost realization of the goals of education, Signh, (2014) emphasized that today are living in the world of information revolution where the mass media plays a vital role in creating an atmosphere of awareness among masses.

The teacher is a central figure in the implementation of the curriculum process, therefore, he is the key factor in determining the quality and success of the availability and how to utilize all instructional resources.

Instructional materials as objects or device which help the teacher to make learning meaningful to the learners. If is not making resources available to centre for educational technology that matters, but gathering these instructional resources utilized by teachers and students, that gets academic that utilization of available resources is more important then, as it makes learning to be more immediate, ready-made by bridging the gap between the world inside and the world outside the classroom by mean of the experiences it provides.

The NCCE as the regulatory and supervisory body to colleges of education. The centers for educational technology as serving as a laboratory for practical aspects of teacher education particularly as microteaching laboratory.

Most CCETs, NCOEs lecturers are found to be lagging behind in the utilization of IM at CCETs. Their poor/lack knowledge of the utilization or lack of knowing the importance of these I.M has derived them to valuable CETs in their respective colleges.

In this era of accelerated globalization of technological development, modern instructional materials, and equipment are not only important, they are expected to be adequately available in a reasonable state and purposely utilized. Okabia, (2012), Omi, (1995), Wanjiku, (2012) states that: they availability and quantity of

materials or resources facilitate smooth operation of any school and thereby enhancing effective teaching and learning activities and when they are so, there is higher educational attainment by students.

The availability of modern instructional materials (like digital projectors, video, camera and computers) does not mean that they will facilitate teaching and learning situation, rather it is when they are utilized properly and skillfully. Wanjikus belief says that the factors affecting availability, acquisition and utilization of resources in the teaching and learning process, it is found that unavailability of educational resources hinders effective utilization.

It is on this background that the researcher tries to assess if modern instructional materials are adequate in the colleges' centers for educational technology in colleges of education, north-east Geo-political zone, Nigeria. And also whether these instructional materials are suitable. The extent they are effectively utilized for teaching and learning. And also to determine the extent the lecturers and students are exposed to utilization of modern instructional materials at colleges' centres for educational technology in the area of study. The assessment of the modern instructional materials was based on the checklist of minimum standards as stipulated by National Commission for Colleges of Education (NCCE, 4<sup>th</sup> Ed. P13-15).

### **Statement of the Problem**

The use of modern instructional materials provides the teachers with interesting and compelling platforms for conveying information since they motivate learners to learn more. The availability of modern instructional materials does not means that they will facilitate teaching and learning situation rather than using them properly and skillfully.

The following are some of the research problems: -

1. The availability and utilization of modern instructional materials (digital projectors, digital camera, digital video, computer) at Centers for Educational Technology in Nigerian Colleges of Education, North-East Geo- political Zone, Nigeria is not well assessed.
2. Most of the Centers for Educational Technology are financially incapable of making modern instructional materials available in their centers.
3. An attempt was made to assess how adequate, suitable and useful modern instructional materials was in Nigeria Certificate of Education (NCE) program in Nigerian Colleges of Education.

### **Purpose of the Research**

The purpose of the research is:

1. To identify the adequacy, suitability and utilization of modern instructional materials at Centers for educational technology at Nigerian Colleges of Education in North-East Geo-political zone of Nigeria.
2. To determine how effectively and efficiently these modern instructional materials are utilized by both lecturers and students in teaching and learning process.
3. To assess how these Centers meet the requirement of the National Commission for Colleges of Education (NCCE) minimum standards in the supply of Modern Instructional Materials.

### **Significance of the Research**

The researcher believes that the findings of this study will greatly help Educational Technologist, lecturers and students in the following ways: -

It is hoped that the findings of this research will significantly help in improving the provision of MIM, and also improve proper utilization of them at Colleges' Centers for Educational Technology in Nigerian Colleges of Education.

It also help relevant organization likes NCCE, particularly during minimum standards, Curriculum Organization of Nigeria (CON), Nigerian Educational Research and Development Council (NERDC) during curriculum reviews.

The research is significant to educational technology courses' lecturers to develop as they make the findings of this research to be benefited in re-structuring the course content durng Minimum Standards reviews for NCE Educational courses.

The study will significant to NCCE and colleges authorities, as it will unveil whether such centers meet the minimum standards or not. So it will serve as an eye opener to NCCE to ensure conformity and for college authorities to bridge these gabs in supplying Modern Instructional Materials.

### **Research Questions**

This research was guided by research questions which are based on the purpose of the research. They are as follows: -

1. Are there Modern Instructional Materials adequately, available, suitable and fully utilized at CETs in NCOEs in North- East Geo-political Zone, Nigeria?

2. What are the factors that hinder availability of Modern Instructional Materials in CETs by stakeholders?
3. To what extent do these Modern Instructional materials/and equipment at CETs conform with NCCE guidelines in Minimum standards?
4. Do the lecturers and students of Educational Technology make effective utilization of the available Modern Instructional Materials at CETs?

### Research Hypotheses

In this research work two hypotheses are tested.

1. There is no significant difference between the mean score of teachers and students on the availability of modern Materials in the NCOEs.
2. There is no significant difference between the responses of teachers and students on the utilization of Modern instructional materials in federal and state colleges of education, North-East Geo-political zone, Nigeria.

### Research Design

This research is survey descriptive research design. Which is set out to use the adequacy, suitability and utilization of educational resources in CETs in NCOEs, Nigeria

### Tools of the Research

The tools used for data collection in this research consisted of NCCE minimum Standards for NCE, Checklist, Observation schedule and **two** sets of questionnaires for the lecturers and students. The researcher discusses the questionnaire with post graduate students, educational technologist and technician, and educational technology lecturers and percentage, mean, standard deviation, t-test are used for analyzing the data.

### Sample and Sampling Techniques

A sample of seven Colleges of Education were drawn from the twelve Colleges of Education made up of three (3) federal and nine (9) state colleges respectively available in the north-east geo-political zone of Nigeria.

The population of the research comprised of 234 lecturers and 378 students, through random sampling technique. The researcher had two pilot study I and II in two colleges of Education (one federal and one state own colleges). The discussed the questionnaires with teachers and students of Educational Technology subjects. Using simple percentage, t-test and standard deviation aimed at answering the questions posed.

### Data Analysis and Results

The following are the analyzed data. Results of research questions 1, 2, 3 & 4 are analyzed and the results are shown in tables below:

**Table 1a: Research Question I: Are the modern Instructional Materials available at CETs in federal and state NCOEs of North-East geo-political zone, Nigeria?**

<b>Table 1a: Lecturers: Frequency Distribution of Modern instructional materials are adequate at my CETs.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	13	5.6	5.6	5.6
	SD	16	6.8	6.8	12.4
	DA	51	21.8	21.8	34.2
	A	110	47	47	81.2
	SA	44	18.8	18.8	<b>100</b>
	<b>TOTAL</b>	<b>234</b>	<b>100</b>	<b>100</b>	

The table 1a above indicate that majority of the lecturers agree that **MIM** are adequate at their colleges. These representing 65.8% or 154 out of 234.

**Table 1b:**

<b>Table 1b: Students: Modern instructional materials are adequate at my CETs.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	10	2.6	2.6	2.6
	SD	22	5.8	5.8	8.5
	DA	93	24.6	24.6	33.1
	A	145	38.4	38.4	71.4

	SA	108	28.6	28.6	100
	<b>TOTAL</b>	<b>378</b>	<b>100</b>	<b>100</b>	

Table 1b above indicate that majority of these students respondents agreed that MIM are adequate at their colleges. This accounted for 253 out of 378 respondents representing 67%.

**Table 2a: Research question III:** the factors that hinder availability of MIM in CETs.

		Frequency	Valid Percent	Valid Percent	Cumulative Percent
Valid	UD	9	2.4	2.4	2.4
	SD	30	7.9	7.9	10.3
	DA	55	14.7	14.7	24.9
	A	131	34.7	34.7	59.5
	SA	153	40.5	40.5	100
	<b>TOTAL</b>	<b>378</b>	<b>100</b>	<b>100</b>	

According to the data collected and analyzed, the results from the responses obtained from the students show that lack of steady electricity supply prevent effective utilization of MIM at CETs whereby from the above table, 284 respondents out 378 which constitute 75% respondents response justified that or affirmed.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	7	6.8	6.8	3
	SD	16	6.8	6.8	9.8
	DA	55	23.5	23.5	33.3
	A	88	37.6	37.6	70
	SA	68	29.1	29.1	100
	<b>TOTAL</b>	<b>234</b>	<b>100</b>	<b>100</b>	

From the table above, the lecturers responses indicates that 174 out of 234 (74.4%) lecturers agreed that lack of power generators hinders utilization of CETs equipment.

**Table 3** The Modern instructional materials at your centre conform with standards stated in NCCE Minimum Standards/Guidelines.

Responses: Status Cross Tabulation				
Count		Status		
		Students	Lecturers	Total
Valid	UD	26	25	51
	SD	24	7	31
	DA	59	40	99
	A	158	104	262
	SA	111	58	169
	<b>TOTAL</b>	<b>378</b>	<b>234</b>	<b>100612</b>

The table above shows responses from lecturers and students in conformity with NCCE guidelines through NCE Minimum Standard agreed with that, 269 respondents out of 378 (i.e. 78%) and 162 respondents out 234 (i.e. 69.2%) respectively. Therefore, based on the above results from the respondents responses the researcher has conclude that the NCOE in North-East Geo-political Zone meets the NCCE requirement/guidelines in providing Modern instructional materials at their CETs.

### Observation Schedule

The results of this research on observation schedule of CETs revealed that most of MIM and resources are available in the NCOEs for the teaching and learning process. They are suitable and fully utilized.

### Discussion and Concluding Remarks

The discussion captures the deplorable state of adequacy, suitability and utilization of MIM at CETs in NCOEs. Miranda and Lipton (1999) and Yusuf (1999) in their studies agree that amongst others, educational technology content should be improved upon by making it relevant to modern information need. Nguyen, Willians & Nguyen (2012) listed LCD projectors computer among the tools that support teaching and learning

in classroom. It is very encouraging to see that college had CET because CETs is very important to the learning and all courses.

The findings supported by the findings of Longe (2012) who stressed the needs for the lecturers to embrace the use of educational technology center in their teaching activities. It portrays the adequacy of the MIM at CETs in the NCCE minimum standards checklist being supplied by the colleges authorities.

The finding is also supported by Oyeronke (2013) that the area of this research on adequacy and suitability and utilization of educational technology in faculties of education, they met the minimum requirement by National University Commission (NUC). It is a verdict of great achievement on the part of all stake holders (federal or state or private) charged with the responsibility for compliance with NCE requirement/guides.

These findings are corroborated with recommendation of general investigation that had examined adequacy and utilization of Educational Resources at CETs in tertiary institutions in Nigeria (Okobia, 2011 and 2013, Doosur and Sadra, 2013, Oyensomu, 2013 and so on) Okobia, (2013) stated that more than 10Ph (chalkboards, Textbooks, pictures, etc) are available and most commonly utilized and also Longe, (2012) recommends that special funds should be mapped out by the government and the colleges' authorities and all other stake holders for the improvement of new ideas and research to be carried not by the lecturers and students apart from the motivation and remuneration to them (lecturers and students).

### **Recommendations**

On the basis of the above findings of this research the following recommendations and suggestions are made to enhance better selection, and suitability and utilization of availability and utilization of MIM at CETs in NCOEs for Teaching and Learning purposes.

1. Lecturers and students should always endeavor to update their knowledge in the area of educational technology in order to expose and to acclimatize themselves to this modern technology apparatus and that they could have the ability to manipulate their functions/utilization.
2. TET-Fund should allocate some funds for workshop, seminar (teachers) exhibition (students) on education technology course(s).
3. The federal government, state government, and non-governmental organizations should endeavor to equip CETs with MIM and necessary instructional packages for teaching and learning process.

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Abdu Adamu Gambaki "Assessment Of The Adequacy, Suitability And Utilization Of Modern Instructional Materials At Centers For Educational Technology In Nigerian Colleges Of Education." IOSR Journal of Research & Method in Education (IOSR-JRME) , vol. 8, no. 5, 2018, pp. 47-51.