

# AN IMPACT ASSESSMENT STUDY ON THE ROLE OF EDUCATIONAL TECHNOLOGY IN THE PROVISION OF SKILLS AND COMPETENCIES IN THE DESIGN OF INSTRUCTIONAL MATERIALS IN HIGHER EDUCATION INSTITUTIONS IN LAGOS STATE NIGERIA

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## ABSTRACT

The objective of this research work is to investigate the condition of Educational Technology in teachers' Education in Adeniran Ogunsanya College of Education, Otto-Ijanikun, Lagos State (Government owned Institution) and the African Church college of Education Ifako Ijaye Lagos State (Private owned Institution). The schools used in obtaining information are school of language, school of vocational and Technical Education, school of Art and Social Science and school of science. A total of two (2) lecturers and two (2) students were used in each schools Based on the records available and the information, obtained through questionnaire, oral interview and observation were administered, oral interview and observation were administered to the sample. The data collected were analyzed using descriptive statistics (simple percentage) the findings revealed that Educational technology is one of the tools that provide learners and teachers the skills and competences in the design, production, utilization and the distribution of instructional materials.

**Keywords:** Educational Technology, Lagos State, Skills, Design, Competencies, Instructional Materials & Distribution.

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## 1. INTRODUCTION

In recent times our educational needs have grown beyond the competence of teachers. It is therefore, essential that teachers should be provided with some materials to aid their teaching. The provision of technology in teachers' education really help and assist teaching and learning and enhance effective teaching both in local, state and National levels. Educational technology comprises of modern Instructional materials which aids teaching and learning such as Audio – Visual aids used in impacting knowledge into individuals. The title of this study is a survey of Education technology in teachers' education. Therefore, there is need to define the concept one after the other.

Education has been defined by many scholars with different meanings depending on each person's view or orientation Format (1964) defined education as he process of human learning by which knowledge is impacted, faculties trained and skills developed in the individual. Some other scholars defined education as a life-long process which bring about a positive and remarkable or notable change in behavior, brought about by the totality of all experiences which a learner (individual) acquires inform of knowledge, skills, attitudes and all others form of behaviors which fit the individual into the society in which he lives. Education can also refer to be a process by which society deliberately transmits its accumulated knowledge, values and skills from one generation to another through institutions.

Technology is usually viewed as both process and as well as product. It is the systematic application of science of the organized knowledge to practical task of deriving reliable and repeatable solution to such task. As a product, it is the hardware and software the product from the application of the technological process. (Molenda and Russel (1981). Technology is such as the direct application of the finding of instructional scientific research laboratory – derived procedures need only minor modification to fit them for general use in education. The psychologist's expertise is paramount skinner (1958)

Technology is also a broad concept that refers to use of knowledge of tools and crafts and how these tools and craft affect our ability to control and adapt to the environment. In human society today, technology is a result of science and Engineering. Therefore, educational technology according to row tree (1982), while discussing learning and technology, he defined education, which is concerned with the design and evaluation of the curricular and learning experiences, and with the problem of implementing and renovating them.

Essentially, it is a rational problem solving approach to education, it is a way of thinking systematically about learning and teachings as well as its evaluation so as to better achieve the purpose. In addition, based on all of the above stated and definition given above, it could be concluded that educational problems, through adequate planning, designing and evaluating of the educational system. The introduction of instructional materials or Audio – Visual aids has constituted the rapid growth to effective teaching and learning of science and technology and other fields of study it also helped in the advancement of subjects.

**2. RESEARCH OBJECTIVE**

The study attempts determine the level of achievement in the practical sense of educational technology. Also to identify the effective contribution of the educational technology to the development of the skills and knowledge to acquire by the potential and the practicing on the effectiveness and efficiency of teaching and learning.

**2.1 Research Question**

1. To what extent can educational technology be relevant in teachers’ education?
2. To what extent has the lecturers and students in Adeniran Ogunsanya and African Church Colleges of Education benefited from the educational technology centre of the institution?
3. Do educational technology centre facilitate student learning in educational technology?
4. Is there any relationship between educational technology and educational technology centre?

**2.2 Design**

The design of this study is descriptive research design which is set out to investigate the state of educational technology in teachers, education within two colleges of education (Government and Private)

**2.3 Sample**

This research work was restricted to educational technology centre of the two institutions Adeniran Ogunsanya College of education and The African Church College of education. Eight lecturers and 10 students from various department of each of the two colleges of education were randomly selected from the under-listed schools.

- ❖ School of Language
- ❖ School of Vocational and technical education
- ❖ School of Arts and social science
- ❖ School of Science

**2.4 Instrumentation**

The research instruments used in this study are lecturer’s and student’s questionnaire. The questionnaires were administered to lecturers and students personally in the 2 colleges of education for collection of data. The simple percentage was used in the data analysis aimed at answering the questions posed.

**3. DATA PRESENTATION AND RESULTS**

**Questionnaire For The Lecturers**

**Table 1**

**Question:** Does educational technology influences student’s performance?

Respondents	Frequency	Percentage
Yes	16	100%
No	0	0%
Total	16	100%

Source: field survey, 2011

The table above has to do with educational technology influence on the students performance, the sixteen (16) respondents responded YES which constitutes hundred percent (100%) in answering the research question one, it could be inferred that educational technology is successfully implemented in both institutions and the same should be extended to other colleges of education.

**TABLE 2**

**Question:** Do you encounter any problem in using educational technology centre?

Respondents	Frequency	Percentage
Yes	9	56.25%
No	7	43.75%
Total	16	100%

Source: field survey 2011

Table two relates the problems encountered by the lecturers during the course of using educational technology centre. Nine (9) lectures responded “YES” which constitutes 56.25% the remaining seven (7) says “NO” which constitute 43.75%. The data above shows that lecturers face some problems when using the centre. Such as lack of power, inadequate instructional materials and equipment.

**TABLE 3**

**Question:** Does educational technology aids students in learning?

Respondents	Frequency	Percentage
Yes	13	81.25%
No	3	18.75%
Total	16	100%

Source: field survey, 2011

Table 3 has to do with how educational technology aid students in learning. From the date collected, thirteen (13) lecturers responded “YES” which constitutes 81.25% while only three (3) lecturers responded “NO” which contributes immensely in developing student teachers in training by:

- a) Providing a forum for exchanging ideas, on the development and use of innovative materials for improvement of education
- b) Encourage potential teacher to participate and develop innovative instructional materials.
- c) Disseminate relevant information to potential teachers in training on the use of local materials in producing instructional (improvisation).
- d) Acquaint students with the use of various media in education and the spirit of enquiring and creativity through the exploration of natural environment and local resources.
- e) To develop sense of cooperation and team-spirit by grouping students for micro-teaching.
- f) Teaching at the educational technology centre is by practical, exploratory and experimental, demonstrated under the supervision of the course lecturer
- g) Imposing the students to career awareness by exposing usable options in the world of job/works
- h) Enabling students to have an intelligent understanding of the increasing complicity of technology available for effective teaching together with their cost implication
- i) Exposing student to career opportunities which facilitate the acquisition of both physicals and intelligent skills which will enable them as individuals to be self reliant and useful members of the society.

**TABLE 4**

**Question:** Does educational technology centre serves large number of students?

Respondents	Frequency	Percentage
Yes	1	6.25%
No	15	93.75%
Total	16	100%

Source: field survey, 2011

Table 4 above investigated opinion whether educational technology centre serves large number of students or not. This question is designed to obtain information about instructional unit of educational technology centre. So as to determine the adequacy of training materials and equipment at the centre, and the level of satisfactions obtainable thereof; in essence, this is to obtain information in related to the assessment of size of the facilities on ground, the capacity of the level of effectiveness of the activity of centre in training student teachers

**Highlight**

- a) Adequacy of equipment needed by all students participating in the training session e.g television set video, camera, projectors, and micro-teaching lab. And supporting staff.
- b) Language laboratory facilities, microphone, video camera, video cassettes, video-disc o source, duplicating equipment, video compact disk etc
- c) Photographic studio materials and equipment
- d) Micro-teaching hall which is capable of accommodating all registered students.

**TABLE 5**

**Question:** Does educational technology centre provides all necessary needs for teaching and learning?

Respondents	Frequency	Percentage
Yes	12	75%
No	4	25%
Total	16	100%

Source: field survey, 2011

Table five has to do with the provision of necessary needs for teaching and learning. From the data collected, twelve (12) lecturers responded “YES”, the response which constitute by choosing “NO” which is 25%. However it shows clearly that the two institutions in question have necessary facilities for learning and teaching.

**TABLE 6**

**Question:** Does educational technology centre have impact in educational technology courses?

Respondents	Frequency	Percentage
Yes	16	100%
No	0	0%
Total	16	100%

Source: field survey, 2011

Table six has to do with positive or negative impact of educational technology centre on educational technology course. The responds was positive, the result from the data analyzed above show that the sixteen respondents says "YES" this shows that educational technology centre have positive impact on educational technology courses and all other courses in the colleges of education.

**QUESTIONNAIRE FOR THE STUDENTS**

**TABLE 1**

**Question:** Do you have enough equipment in your educational technology centre?

Respondents	Frequency	Percentage
Yes	6	30%
No	14	70%
Total	20	100%

Source: field survey, 2011

Table one above investigated enough equipment in educational technology centre. However, out of twenty respondents, six responded positively by saying "YES" which constitutes 30%, while fourteen respondents responded by saying "NO" which constitutes 70%. More so, from the analysis we can observe that the two institutions have insufficient equipment for effective teaching and learning as responded by the students.

**TABLE 2**

**Question:** Does educational technology centre facilitates your learning?

Respondents	Frequency	Percentage
Yes	17	85%
No	3	15%
Total	20	100%

Source: field survey, 2011

Table two which has to do with student's level of knowledge acquisition through educational technology centre in the two institutions. Among the twenty (20) respondents, seventeen responded positively which constitute 85% while three students responded negative which constitutes 15%, however, it is clearing shown that educational technology facilitate learning process in the two institutions.

**TABLE 3**

**Question:** Have you ever visit educational technology centre in your college?

Respondents	Frequency	Percentage
Yes	12	60%
No	8	40%
Total	20	100%

Source: field survey, 2011

Table 3 answered the question on whether the students have ever visited educational technology centre for any purpose and if it is encouraging. Here twelve students have visited educational technology centre which constitute 60%. Other students responded negatively which also constitute 40%. However, the fact remains that not all the students are able to visit educational technology centre of the two colleges due to one reason or the other.

**TABLE 4**

**Question:** Is there any negative impact of educational technology centre on teaching and learning?

Respondents	Frequency	Percentage
Yes	3	15%
No	17	85%
Total	20	100%

Source: field survey, 2011

Table 4 shows whether there is any negative impact posed on students by the activities of the educational technology centre in the pursuance of their teaching career. Only 3 students responded positively which constitute only 15% while seventeen (17) students responded negatively by saying “NO” to the question which constitute 85%. This indicates that there is little or no negative effect of educational technology centre on the students learning process.

**TABLE 5**

**Question:** Does educational technology centre link theories to the practical?

Respondents	Frequency	Percentage
Yes	6	30%
No	14	70%
Total	20	100%

Source: field survey, 2011

Table 5 requested if the theories are linked with the practical in the educational technology centre of the two institutions. However, among twenty (20) respondents, only six (6) responded negatively constituted only 30% while fourteen (14) students responded negatively by saying NO which along the line constituted 70%. This clearly shows that majority of the lecturers make use of educational technology centre.

**4. DISCUSSION AND CONCLUDING REMARKS**

The research work has been conducted to know the condition of educational technology centre in teachers’ education using Adeniran Ogunsanya College of Education and The African Church College of Education. Ifako – Ijaye, Lagos - State. The findings have revealed that government and private owners of various institutions does not adequately provide enough equipment for the practice of educational technology. Also there is no adequate professional staff to assist lecturers in using Educational Technology Centre.

The findings have stressed the needs for the lecturers to embrace the use of educational technology centre in their teaching activities instead of holding fast to the old traditional talk-chat approach. It has been observed that in spite of the numerous instructional materials and equipment in the college lecturers still shy away from utilizing them. The approach of lecturing whereby lecturers go to the lecture room with notes and dictate to the class is still the order of the day. No attempt is made in using the multi sensory resources and materials which will helps in improving teaching and learning process.

The Irony of this is that the lecturers expect students to produce and use these resources on their own especially during the teaching practice exercise. How can they do this effectively when the Lecturers have failed to demonstrate the possible effective use of those resources? In conclusion prospective teachers should learn from their lecturers who use these resources and make use of them when they get to the field Therefore, it is hereby advised that college’s authority and government should provide the following:

- a) **FUNDING:** Special funds should be mapped out by the government and the school authorities and all other stakeholders, for the improvement of new ideas, and research to be carried out by both students and lecturers.
- b) **MOTIVATION:** Provision of adequate reward compensation for lecturers who practice educational technology property. Now lecturers in tertiary institutions are not encouraged to practice the concept because of the “publish or perish syndrome which caused such institution a partial disregard for the practice of educational technology.
- c) **LEARNING RESOURCE CENTRE:** Building of a standard (adequately staffed and equipped) learning resource centre in each Local Government Area by each state that will cater for all the institutions in the area.
- d) **PROVIDE ADEQUATE INSTRUCTIONAL MATERIALS:** Government should supply adequate instructional materials to all schools.
- e) Networking of Educational Services Centre in Nigeria (NESCNC) should be set up to provide a forum for exchange of ideas on the development of innovative materials for improvement of education.
- f) Nigeria Education Research Development Council (NERDC) should ensure the operation of the network and encourage lecturers to participate and develop innovative instructional materials.

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