

## **IMPACT OF ORGANIZATIONAL STRUCTURE OF EDUCATIONAL TECHNOLOGY RESOURCE CENTER ON TEACHING AND LEARNING IN NIGERIAN TERTIARY INSTITUTIONS**

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### **Abstract**

Most teachers do not have access to resource materials largely because resource centers both at the national, state and even school levels are not effectively organized. This paper ex-rayed the impact of the organizational structure of Educational Technology Resource Center on teaching and learning, in Nigerian Tertiary institutions. Its main purpose is to expose the impact of the good organizational structure of educational technology resource center on effective teaching and learning. Concepts of organizational structure, teaching and learning, and educational technology resource center in Nigerian tertiary institutions were emphasized. Impacts of the organizational structure of educational technology resource center were enumerated. A critical analysis research approach was adopted. As a result of the analysis, it found out that a good organizational structure of an educational technology resource center ensures that students participate effectively in the instructional process. It therefore, recommends that educational technology resource centers be created within the fore-walls of the classroom for easy accessibility of resource materials by both the students and the lecturers so that education can become more meaningful and productive.

Key Words: Organization, Structure, Education, Technology, Resource, and Center

### **Introduction**

The desire for both qualitative and quantitative education has multiplied the problems of providing an effective learning/teaching environment in Nigeria as well as other parts of the world. According to Imogie (1976), the phenomena of increased enrolments coupled with shortages of qualified teachers and teaching materials have increased the potential contribution of Educational Technology in the improvement of the learning/teaching environment. From the observations of Imogie, much teaching goes on in many classrooms though little learning takes place. The immediate problem is how to achieve successful teaching and effective learning in the classroom. Successful teaching brings about effective learning. Effective results can be achieved when the learning environment (the classroom) is well equipped with teaching and learning resources. Thus, for Educational Resources to be properly used for effectiveness, their use must be properly planned and organized. This can be achieved through the establishment of a Resources Center that would be within the reach of both the teachers and the learners. Ngoka (2005) identified a resource center as a service area, providing for the use and distribution of information to students and teachers in multi-

media forms to facilitate the teaching and learning process. Eze (2002) opined that a resource center is a building in or outside the school system with adequate space, staff, software, and hardware materials, where learners may go and study either individually or in a group.

Ajelabi (2000) noted that educational resources centers play a prominent role in the designing, planning, and implementing the instructional process as part of educational technology. He, therefore, defined an educational resource center as a setting or place where teaching/learning materials, tools, and equipment are designed, created, developed and utilized, distributed, borrowed, and stored. The central function of a resource center is to raise the quality of education through better and more coordinated use of various resources and improvement in curriculum development activities, in teacher's performances, and in the environment in which teaching and learning place. Kinder (1959) as cited in Oputa, (2005) stated that the problem of the teacher is centered on how he can bring the world into the classroom. Teachers ensure the use of any material or techniques to foster learning. One major challenge to improving the use of educational resources to bring about rewarding teaching and learning is to bring down a resource center to the school level in fact classroom level so that instructional materials can be within the reach of both the teachers and the learners for effective usage. Abimbade (1997) maintained that a school Resource Centre helps individual learners and teachers with skills and competencies in the design, production, utilization, and distribution of resource materials, helps in ameliorating the classroom for learning materials, guarantees learners immediate access to materials as well as provide access by teachers and public to a wide variety of instructional materials. Educational Resource Centers are established to house different forms of resources meant for educational growth (Sheu, 2007). It is in line with this fact that the National Policy on Education (FRN, 2013) section 8, under educational support services, has called for the establishment of educational resource centers at the federal and state levels. It is expected that for improved quality of teaching and learning, there must be effective provision for the use of ERCs by the schools and populace. The task before school in recent times is so broad in scope and complicated in character that teachers must utilize every available method to ensure that learning takes place. In this manner, the teacher needs to be encouraged and equipped with necessary educational materials or resources. The development of school resource centers demands the encouragement of school administrators and decision-makers.

Every school has a defined structure meant to regulate the operations and functions of its departments. Members of the school are expected to adhere to the dictates of the structure in pursuit of the stated goals and objectives of the organization. The school structure determines how resources are shared among members in different departments and the structure defines the leader of each department. However, the school structure has a positive impact on school performance. Thus, the schools need to ensure that the set organizational structure be extended to the various departments in the school such as in the educational technology resource center to permit healthy teaching and learning.

### **Concept of organizational structure**

Organizational structure refers to the way people are organized or how their tasks are divided and coordinated. Organizational structure can also be looked at as the formal design among people and gatherings concerning the duties, designation of undertakings, and specialists in the association. The structure of an organization defines the way individuals should operate, in departments or divisions and it is meant to link people as they interact towards achieving set goals. An organizational structure reveals vertical operational responsibilities and horizontal linkages of individuals. Organizational structures may be much complex due to the size and geographic dispersal of an organization.

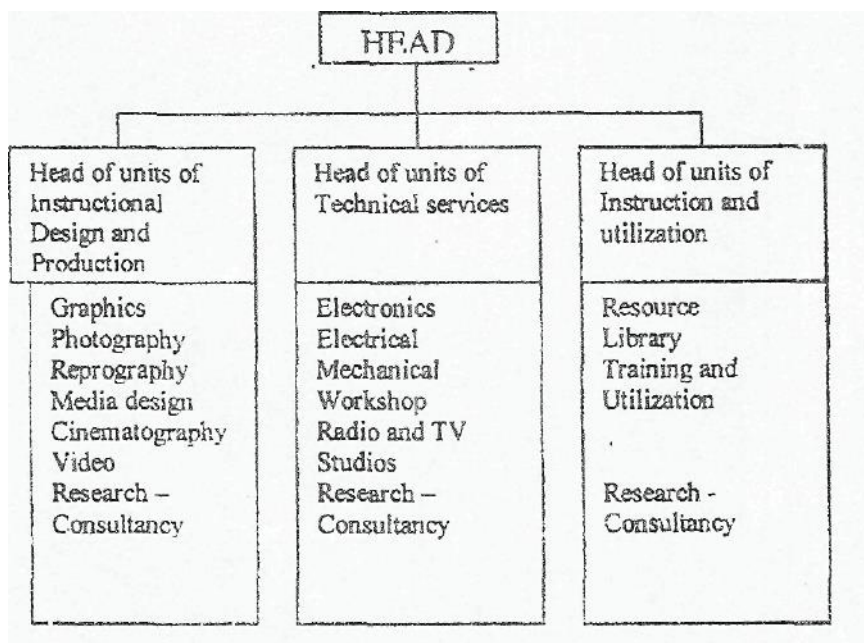
In their own opinion, George and Jones, (2005) depict an organizational structure as the relationship between the management team and the workforce for performing formal tasks and reporting. The management team designs the structure of an organization and the basic inspiration is the motivation of employees to work to their expectations in an organizational structure that allows them to best execute their duties to produce the desired work. Given the above definitions, one can assume that an organizational structure is the physical format of duties in an association. Schools have predefined structures whose implementation depends on school leadership, some are made rigid while others are flexible. Therefore, the formation of an organizational structure typically refers to the hierarchical arrangement of lines of authority, communications, rights, and duties of an organization. The structure typically determines how the roles, power, and responsibilities are assigned, controlled, and coordinated, and how information flows between the different levels of management. A structure depends on the organization's objectives and strategy. In a centralized structure, the top layer of management has most of the decision-making power and has tight control over

departments and divisions. In a decentralized structure, the decision-making power is distributed and the departments and divisions may have different degrees of independence. The departments in a school set-up are categorized according to functional or subject areas, these departments are meant to be interconnected to shape the structure of the school.

For instance, in a Nigerian tertiary institution, Organizational structures are defined by the School management. At the epitome of the center, there is a head of the department followed by the heads of units - the head of the units of instructional design and production, the head of units of units of technical services and the head of units of instruction and utilizations whose span of control hoovers over their units.

The organizational structure of the educational technology resource center must facilitate joint working between academic services units to enable them to deliver the learner-centered vision. Besides, the technician instructors in the learning center assist the students to meet their learning needs, particularly to make use of the hardware and software.

The educational technology resource center is an organized activity consisting of director, staff, and equipment housed in one or more specialized facilities for the production, procurement, and presentation of instructional materials and the provision of developmental and planning services related to curriculum and teaching in an institution.



*(Diagram showing Organizational structure of Educational Resource Center in a Typical Nigerian Tertiary Institution)*

### **Educational Technology Resource Centre**

Educational Resource centers at the colleges of Education, Polytechnics, and Universities are to be known as centers for Educational Technology (CET). Ajelabi (2000) defined Educational Resource Centre as a setting or place where teaching-learning materials, tools, and equipment are designed, created and developed, utilized, distributed, and stored. According to him, Educational Resource Centre varies in terms of its arrangement, ranging from a classroom corner to an entire building complex, depending on the objectives, curriculum emphasis, and financial ability of the proprietors of the institution. Educational Resource Centre is a place used primarily for the storage, supply, and utilization of learning resources that have been organized into an integrated collection of materials of all types (print, auditory, visual, kits, and games) along with any devices and special settings. In other words, an educational resource center is a place where learning materials, services, and facilities are acquired, produced, classified, and stored for easy retrieval when needed. It promotes the education of the users, encourages interaction and cross-breeds of ideas.

Educational resource centers are known by different names such as media center, learning resource center, resource center, center for curriculum and instructional development, and so on. Centers can be established for specific areas as the cases of mathematics center, science center, center for language development, and French language center. It can be for specific age groups, professionals, or gender. For instance, the Women's Center, Children's Center, Center for Handicapped Children, Teacher's center, and Press center. The enhanced status given to Educational Technology as a discipline in the school system has automatically given enhanced attention to educational resource centers. Learning Resource Centers (LRC), Educational Resource Centers (ERC), Instructional Material Centers (IMC), Educational Technology Centers (ETC), Instructional Technology Centers (ITC), and so on, are various terms used for the same thing.

The functions of Educational Technology center was established by Nwafor (2021: 172). She identified nine functions of the center for Educational technology as:

- i.) Proving a rationalized approach to the acquisition of Audio-visual equipment and materials within the institutions.
- ii.) Building up a pool of basic audio-visual equipment and materials.
- iii.) Providing Campus Audio: - Visual services for academic administrative staff and students.
- iv.) Providing professional assistance to the staff and students in the design, production, and administration of media materials for the improvement of teaching and learning.
- v.) Serving as a center for the adoption, diffusion, and dissemination of instructional innovation through collaboration with other educational media-related centers and agencies within and outside Nigeria.
- vi.) Providing training (through workshops, orientation, seminars, etc.) in the use of educational media for personnel in the institutions.
- vii.) Planning and carrying out research activities in the field of Educational Technology.
- viii.) Coordinating and providing professional/technical assistance to faculties, departments, centers, etc. in setting up satellite, specialized Audio-visual units to meet their immediate needs and
- ix.) Coordinating and providing Audio-visual services in the lecture theatre/auditorium and classrooms including public address, projection, radio, and closed-circuit television system.

### **The Concept of Teaching and Learning**

Teaching has been defined in different ways by scholars while the layperson refers to teaching as what the teacher does in the class with the learners to make the learners learn, some scholars assert that teaching goes beyond this, as it refers to other related activities designed by the teacher for the learners in and outside the class to ensure that learning takes place. Izuagba (2008) asserts that teaching refers to a series of interrelated activities designed by the teacher using materials/ resources drawn from the learner's experiential background to

enable the learner to concretize knowledge. In other words, teaching involves a series of activities designed by the teacher to enable learners to learn. This means that the purpose for the activities is based on the intentions of the teacher, as the activities are seen as a means of achieving the intentions (changes in the behavior). The main task of the teacher is to facilitate learning using various means and media.

Learning can be described as a relatively permanent change in behavior as a result of prior experiences. For a change in behaviour to be termed as learning it must be relatively permanent. To psychologists, learning is a process and a product. As a process, learning is the acquisition of knowledge, idea, skill, values, and experiences which enable the individual to modify his world view or to realize his goal or perform a task which hitherto he could not do. According to Onwuka (1996), “learning is the permanent acquisition and habitual utilization of the newly acquired knowledge or experience”. Onwuka’s definition of learning vividly highlights the process and product dimension of learning – acquisition of new skill, knowledge, and experience (process) and the utilization of whatsoever that has been acquired (product) in performing new tasks. The conditioning Psychologists see learning as a change in behaviour as a result of a repeated presentation of a stimulus and the individual’s attempt to react to it positively. To them learning is a habit formation. A habit is formed when a response to a stimulus is repeated similarly several times, as a child becomes accustomed to the stimulus. When this is done we say learning has taken place.

### **Tertiary Education in Nigeria**

Tertiary education is the education given after Post Basic Education in institutions such as universities, colleges of education, polytechnics, monotechnics and other specialized institutions such as Colleges of agriculture, Schools of Health and Technology and the National Teachers’ Institute (NTI). The activities of tertiary institutions include among others: teaching, research and development, generation and dissemination of knowledge. The goals of tertiary education are as follows:

- a. Contribute to national development through high level relevant manpower training;
- b. promote accessible and affordable quality learning opportunities in formal and informal education in response to the needs and interest of all Nigerians;

- c. provide high quality career counselling and lifelong learning programmes that prepare students with the knowledge and skills for self-reliance and the world of work;
- d. reduce skill shortages through the production of skilled manpower relevant to the needs of the labour market;
- e. promote and encourage scholarship, entrepreneurship and community services;
- f. forge and cement national unity; and
- g. promote national and international understanding and interaction.

Tertiary Educational Institutions shall pursue these goals through, quality student intake, quality teaching and learning, research and development, high standard in the quality of facilities services and resources e.t.c (FRN, 2013).

The administration of the different types of tertiary institutions is defined by the Federal and State governments' legal instruments which establish them. Hence, universities are managed by the government through the National University Commission (NUC). That of Colleges of Education are managed by National Commission for Colleges of Education (NCCE), while Polytechnics are coordinated by the National Board for Technical Education (NBTE).

### **The Need for Learning Resource Centre in the Nigerian Tertiary Institutions**

A Learning Resource Centre can be established by an institution within its premises. Two or more schools that are closely located can also pool their resources together to establish a center to serve their teachers and students. The building can be an abandoned public building such as political party houses, closed down schools or some parts of the schools.

There are many reasons for centralization of resources which include the following:

1. It provides a wider range of materials to the users than an individual collection.
2. It brings the materials close to the users and in a place too. The school educational resource center is closer to the students than the state and local government centers.
3. It affords teachers and students the opportunity of sharing ideas on the production and utilization of materials including having the knowledge of variety of learning resources.
4. It lessens for the teacher the burden of producing materials each time he/she is planning to teach and encourages him/her to use instructional materials while teaching.

5. It makes for effective and for efficient utilization of the available human and non-human resources. One resource produced by a teacher or student under the guidance of a teacher can be used by different teachers for several years.

6. Though some teachers may not support the idea of submitting their materials to a central pool, it makes for better storage and protection of the materials. However such teachers should be allowed to withdraw their materials when, they want, especially, if they financed the production without the support of the school authority.

7. It will be difficult for any Nigerian teacher to effectively teach such a large class how much more of individualizing instruction without learning resources.

8. School learning Resource center will help to augment the deficiencies of the teacher due to poor training. What students could not learn from the teachers they learn from the College Resource center.

Educational technology resource center is a school-based in-service education and training center for the teachers.

### **Impact of Educational Technology Resource Center on Teaching and Learning**

The development of educational technology resource center in Nigerian tertiary institutions can restore teaching and to the right positions. Some weaknesses in the teaching and learning process in the classroom can be overcome by using materials and equipment in an organized educational technology resource center. Besides, services and various activities provided by the resource center for all students and teachers can strengthen the institution's coherence. The educational technology resource center can function as symbolic of the dedication of the institution to the fostering of learning by students.

The impacts of the organizational structure of educational technology resource centers include savings, improvement of instruction, and institutional coherence. Centralization of procurement and utilization of instructional equipment, materials, and facilities results in saving men, money, and time. Educational resource centers students by supplementing the learning process. They function as a place to introduce, reinforce, and expand student learning, centers can provide access to learning materials or serve as a peer learning center. The organized educational resource center provides services that enhance teaching and learning through the provision of facilities such, science laboratories, workshops, computer and internet services to schools.

Traditionally, lecturers have used much of their class time with students to disseminate information through lectures and follow-up discussions. This was especially the case in introductory-level courses, where students lack a foundation in the basic concepts and principles of a field. In an era of advanced technology, this approach to instruction seems archaic and inefficient. Computers, especially web-based resources, can disseminate basic information more efficiently and more costily than human beings can. For example, Gregory Farrington (1999) recommends that instructors use the web to do what they can do well. This includes presenting information to students in a variety of formats, twenty-four hours per day. Students can access course material when it is most convenient for them and return to it as often as they need to achieve basic comprehension, competence, or mastery.

Following this revised method of facilitating learning, traditional lectures can be replaced or pared down. In their place, classes can be more informal, seminar-like sessions with more free-flowing discussions structured by students' interests, questions, and concerns. In other words, appropriate use of the organizational structure of educational technology resource center applications can help instructors to structure more active learning opportunities. Research shows that active engagement in the learning process helps to motivate students and enhance their learning outcomes. The new organizational structure of the educational technology resource center can facilitate active engagement in learning by reducing the amount of class time where students sit passively listening to lectures.

Organizing educational technology resource centers can also help to make education a much more interactive and collaborative process. Email, course-based websites, and computer-based chat rooms are some of the technology-enabled resources that facilitate communication and teamwork among students. Research by education scholars has shown that collaborative learning opportunities enhance recall, understanding, and problem-solving. Educational technology resource centers can greatly ease the work of collaborative design teams, peer writing groups, and other types of collaborative learning groups, even among students who do not live in the same geographic area and who cannot meet face to face.

While educational technology resource center helps to promote collaborative learning, it also helps to personalize and individualize education. By reducing the need to deliver vast amounts of information, it can free an instructor to devote more time to individual students. With more time to interact and get acquainted, lecturers can adapt their teaching strategies

and assignments to bring them more in line with the interests and needs of the students in their classes.

Since education's goal is to help the learner reach his or her full potential, education should not be designed for the convenience of the instructor or the educational institution. Essentially, an educational resource center empowers learners to take more control of their education than ever before. The expanded reach that technology affords educational institutions has encouraged many new providers to offer educational services. This increased competition enables consumers to choose the learning opportunities that best meet their needs within the constraints of their life circumstances. As technology transforms the educational marketplace, the balance of power is shifting from the education provider to the education consumer. Education consumers are now freer to pick and choose, from a variety of sources, the learning opportunities that meet their goals. In this fluid educational environment, the old system of accumulating credits from one or two nearby institutions becomes too restrictive for many students who are balancing a variety of personal and professional roles.

There is a related shift underway as technology transforms the teaching and learning process. The traditional higher education measure of educational achievement, the credit hour, is also being questioned. Technology's potential to lower the cost of education is very important. The ability of computers and telecommunications to reach large audiences with the same high-quality educational programs has raised hopes for economies of scale never possible in the very labor-intensive traditional forms of instruction.

## **Conclusion**

This work focuses on the organizational structure of educational technology resources center on teaching and learning in Nigerian Tertiary Institutions. In our schools today, there is nothing as important as how to enhance the rate at which teaching and learning can be more effective. Teaching and learning using resource materials are of utmost importance in ensuring that students participate effectively in the instructional process. It is vital to note that utilization of materials in the educational technology resource centers would improve the quality of instruction and make education more productive because teaching and learning without adequate resource material are said to be ineffective. Educational technology

resource centers are for serious students by supplementing the learning process. They function as a place to introduce, reinforce, and expand student learning, centers can provide access to learning materials or serve as a peer learning center. The educational technology resource center provides services that enhance teaching and learning through the provision of facilities such, science laboratories, workshops, computer and internet services to schools.

### **Recommendations**

Based on the discussions so far, the following recommendations were made:

That educational technology resource center should be created within the fore-walls of the classroom in all our Tertiary institutions for easy accessibility of resource materials by both the students and the lecturers so that education can become more meaningful and productive. All our Tertiary institutions should as a matter of urgency create and as well organize their educational technology resource center for effective teaching and learning and to enable students to participate actively in the instructional process to reduce verbalism to the barest minimum.

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