MANAGEMENT OF INSTRUCTIONAL MATERIALS FOR EFFECTIVE TEACHING AND LEARNING

OKEZE WILSON OBINNA,
College of Education,
Michael Okpara University of Agriculture, Umudike,
PMB 7267, Umuahia, Abia State, Nigeria.
obisolid626@yahoo.co.uk

&

OGWO-AGU JACINTA NKEMEJINA
College of Education,
Michael Okpara University of Agriculture, Umudike,
PMB 7267, Umuahia, Abia State, Nigeria.
jacinta2010@yahoo.com

&

EJIM CYPRIAN
College of Education,
Michael Okpara University of Agriculture, Umudike,
PMB 7267, Umuahia, Abia State, Nigeria.
jeobest993@gmail.com

Abstract
The primary goal of every organization is to achieve and maintain effectiveness and efficiency. Education industry has its set goals and objectives which were introduced by the early education managers (missionaries) through the exercise of oratory power which produced dull students in the classroom. Innovations in Nigerian education system have made obsolete the age long method of talk-n-chalk in the classroom by ushering in the use of instructional materials for retention and concretization. This paper therefore, examined the meaning of management, instructional materials, and teaching and learning. It also identified the use of educational media as a critical factor for effective teaching and learning. The paper finally recommended supervision of instruction and in-service training of administrators and teachers for quality instructional delivery.

Keywords: Management, Instructional materials, Teaching and Learning.

Introduction
The growth and development of any nation is built upon the level of education attained by its citizens. Education therefore becomes an integral part of every society for the acquisition of skills, attitudes norms and other such things for the development of the individual and the society. Nigeria as a nation requires adequate human and material resources to preserve its cultural heritage, improve its social organization, enhance economic development and reform the political structure. Whitehead in Ihekoronye (2018) described education as a social process and growth. This implies that education is life in itself and not a preparation for life and the key players in this industry are the teachers who should drive their subjects home by ushering in some kinds of materials or resources or forms of media that can be used to record, store and retrieve information to meet the challenging needs of the modern education. Students should be given what to do and not only what to learn. This will bring about reflective
thinking and all round development of the child in the 3 domains of education (cognitive, affective and psychomotor). Teaching and learning materials that learners can see, touch or feel, hear, taste or improvise on their own will assist the teacher better than the age long method of listening, seeing, reading and writing. This calls for the introduction of instructional materials such as text books, charts, models/mock-ups, radio, television, projected and non-projected materials that will give room for effectiveness and efficiency in teaching and learning process.

Instructional materials refer to tools used in educational lessons which include active learning and assessment. It can also be seen as any resource a teacher uses to help him teach his students (Angela, 2016). (Ibanga, 2012) defined instructional materials to mean human and non-human materials and facilities that can be used to ease, encourage, improve and promote teaching and learning activities through a systematic way of designing, carrying out and employing the total process of learning and communication and employing human and non-human resources to bring out a more meaningful and effective instruction. Our deduction from the above is that instructional materials are organized resources to aid instruction such as textbooks, newspapers, journals, charts etc. these materials helps the teacher to introduce new concept to students and for a clear picture of the lesson for quick understanding and commitment to memory. When mastery is shown on a basic level, more challenging materials can be introduced into the lesson by the teacher. It is important to note that materials within the resource that appropriately relates to the specific learning objective should be chosen by the teacher. Stones, sticks, corks etc can be used for counting of numbers in mathematics for easy understanding of Nursery/Primary school pupils. In his own contribution, (Lukar, 2016) opined that it is essential to use graphs on a coordinate plane when learning about equation of a line so that students can actually see how a line is graphed. The above illustration will bring about meaningful learning in teaching through a method that will respect learner’ cognitive integrity and offer reality experience.

Teaching has its own laid down principles and methods and for effective teaching and learning process in the classroom, the introduction of instructional materials will make teaching explicit and realistic for the teacher and the learner. Teaching and learning are two sides of the coin. They are inseparable since the primary objective of teaching is to cause a permanent change in behavior of the learner. Kunuba (2017) defined teaching as a science and an art. It is the teacher behaviour and activities designed and performed to produce a change in learner’s behaviour. Learning according to Smith (2015) is both a process and an outcome. As a process, it is part of living in the world, part of the way our bodies work. And as an outcome, it is a new understanding and an appreciation of something. Learning can take place in different forms; we can learn on our own (independent study), we can learn by sharing view with others formally or informally, but the major concern of this study is learning by doing through the use of instructional materials to ensure quality and quantity of instruction hence, the topic.

**Meaning of Management**

People come together on daily basis to improve their life styles, create awareness of a particular commodity or services and reshape the society for better living. At the centre of their activity lies the accomplishment of a targeted objective. Formulation of objectives, amassing resources and a continuous process of ensuring that the task of an organization is efficiently fulfilled through coordination and utilization of available resources becomes a right step towards the achievement of identified objectives. This however calls for a serious thought on how to organize people, make judicious use of available resources and time in a systematic manner to achieve the pronounced objectives. Management therefore sets in as the process of designing an environment in which individuals working in group effectively accomplish targeted objectives. Okafor (2013) defined management as an interactional process involving planning, organizing, coordinating and controlling or leading in order to use available resources to achieve a desired outcome in the fastest and most efficient way. Douglas & Duru-Uremadu (2017) described management as the judicious application of human, infrastructural, material, financial and time resources towards the attainment of organizational objectives. From the above review of the concept of management, Ogbonnaya (2009) deduced that:

a. management is a social process which has objectives to achieve
b. management involves planning, organizing, coordinating, staffing, leading, directing and controlling of resources towards the achievement of goals or objectives
c. management is also the guidance or direction towards the attainment of organizational objectives

It is with efficient management that formal organizations like school can achieve pre-determined objectives through proper coordination, good human relations and summative evaluation of the activities of the establishment. Management is a network that connects people together with a high degree of morale and sense of reasoning to pull resources together (human and material) in order to actualize their goals.

Drucker in Douglas and Duru-Uremadu (2017) averred that management is what the modern world is all about and management is the central activity of modern society. According to them, the modern world characterized by sophisticated life styles, a high standard of living, heavy industries, advanced communication facilities and modern educational systems is absolutely without proper systematic, methodical and sophisticated management. In the field of education, it is very important to manage the available resources which include instructional materials because of its role in the achievement of educational objectives.

It is sad on the other hand to observe in our primary and post-primary schools in Nigeria that the use of instructional materials in the classrooms is only but a probable theory devoid of any practical application.

Teaching practice supervision experience (2018) has shown that some of the instructional materials such as books, pictorial charts, models and mockups provided by some state governments to schools for quality delivery are being eaten up by rats and insects in the offices of the headmasters and principals due to poor management. Teachers match to the classrooms with their lesson notes to exercise their oratory power instead of being accompanied with some teaching aids that will make the lesson real and meaningful.

An effective and efficient management of instructional materials will tremendously improve the quality and quantity of instructional programmes as well as general development of education. Instructional materials are considered important in teaching and learning because they can significantly increase student’s achievement by allowing the students to independently explore the knowledge as well as providing retention and concretization. It is evidently clear that that the use of instructional materials can stimulate and motivate students to achieve direct effort if managed effectively.

**Instructional Materials: a vital tool for quality instructional delivery**

Every teacher needs materials like paper, chalkboard, chalk, pen, inspirational wall signs, models, charts etc to foster learning. Teachers use a variety of tools to improve the quality and quantity of teaching and learning. Instructional materials therefore, can be defined as the tools used for accessing, manipulating and using information in educational lessons for a successful classroom. It is a term used to describe the resources teachers use to deliver instruction by supporting students learning, increase students’ success and make the lesson real to the learner. It includes a variety of media, manipulative and supplies introduced into the lesson to achieve valued outcomes. Adoyin (2010) defined instructional materials as tools locally made or imported that help to facilitate the teaching and learning process. They are print and non-print items that are rested to impact information to students in the educational process (Effiong and Igiri, 2015). In support of the above view, Kadzera in Hilda and Benard (2015) submits that instructional materials bring life to learning by stimulating students to learn. They maintained that the use of instructional materials in the classroom has the potential to help the teacher explain new concepts better for easy understanding by the students.

Instructional materials in this context is seen as important condiments that makes teaching and learning taste juicy, even though they are not end in themselves but means to an end as the teacher remains the wheel and hub of the teaching and learning process that uses them to achieve teaching and learning objectives.

Some of the instructional materials necessary for effective teaching and learning include the chalkboard, graphs, maps, pictures and charts, cartoons, slides, filmstrips, models, radio and television. The importance of the use of these materials cannot be underestimated. Experience in situation according to Brown (2005) prepares a person to respond to similar situation in future. Use of instructional materials can appeal to the individual attention by creating interest goal that will help the learner achieve direct effort. Teachers’ problem of motivation is one of arranging situation with instructional materials in which the learner will see goals he want to attain. Education has gone beyond oral teaching and rhythms in the classroom to a practical demonstration of the activities that will provide the base for learning achievement in form of objects, persons and symbols that will enhance the memory level of the students. Instructional materials are critical ingredients in teaching and learning since they make the teacher to be bold, effective and productive in the classroom and equally enables the students to have practical experiences which will help them develop skills,
Teaching materials needed for inquiry methods are sometimes non-existent and relatively expensive when available. Apart from being available and adequate in primary and secondary schools, instructional materials should be used appropriately and managed carefully by teachers and head teachers. Unfortunately, improvised materials to replace real objects for effective classroom performance are being neglected by teachers as one of the teaching aids that will buttress their classroom activities. Examples drawn from our local environments will remain permanent in the memory of the students than that from the oversee countries that will only be told as a history.

Effective implementation of the school’s curriculum is showcased through instructional materials since valued outcomes and developmental appropriateness determine what instructional materials to be used and when to use them. The duty of the teacher however, is to provide conditions for students access since there are varieties of instructional materials which are updated and upgraded quickly in response to new information and surroundings. Every lesson has an instructional material suitable for it; therefore the selection of instructional material in the classroom depends on the lesson to be taught. To teach figures of speech in English Language, for instance, a pictorial chart that explains ‘Noun’ as a name of a person, animal, place or thing will be appropriate. Counting of numbers in Mathematics especially in the Nursery/ Primary classes can be taught better using sticks and pebbles. Romiszowski, Walkin and Hills in Hilda and Benard (2015) stressed that if instructional materials are properly selected and used, the following will occur:

- Learning would be interesting and meaningful
- Knowledge acquired would be retained for a longer time
- Different skills would be acquired by learners
- Students would be actively involved during lessons.

The concept of Teaching and Learning
Teaching is as old as man; the inculcation of knowledge starts from the cradle to the grave. The essence of teaching is to bring about learning which is an ongoing process that has no end till the end of life. The word teaching has been defined by various scholars in various ways. Ozano (2013) defined teaching as an organized presentation of facts, ideas, skills and techniques to students. It also involves the sharing of knowledge in the process of developing the learner. In his own words, Oladosun (2014) described teaching as an activity that is aimed at bringing about eloquent learning through a method that is normally and pedagogically accepted. He maintained that teaching involves a teacher, a learner and content in form of facts, information and a skill to be impaired. In agreement to the above, Ekanem (2008) perceives teaching as a nomadic interactive human process involving complex decision-making on different aspects of classroom collaboration. Generally, teaching involves some activities on both the teacher and the learner and these activities must be designed and guided so as to promote learning. Teaching therefore can be deduced as the guidance of students through planned activities to acquire knowledge and skills, attitudes and norms that are necessary for possible adjustments in the society for future development. Akinpelu (2009) submits that teaching is the deliberate effort by a mature or experienced person. This definition has implications for teachers since whenever a teacher is in the classroom, he tries to know the members of the class and his role in the classroom in an attempt to guide and direct the immature learners to learn. It is only when learning has taken place as a result of some effort by the teacher that the effort can be referred to as teaching.

Okoro in Aguokagbuo (2012) defined learning as a relatively change in behavior which is the function of prior behavior (usually called practice). The idea of prior behavior according to him connotes some former experiences. In other words, learning may be described as a process whereby as a result of experience, some change in patterns of adjustment occurs. He concluded that the key terms are that learning:

- is a change in behavior, disposition and capability that is not the result of growth
persists over a period of time
is a result of experience and practice
is observable when the individual perform some activities

Learning is experience gained through modification (Kundu and Tutoo, 2008). In support of the above, Smith (2009) averred that learning is the storage of information that can be reproduced. During learning, experience is gained. All the efforts of the learner and the teacher are bound to be purposeless without learning outcome which can easily be achieved through the use of educational media in the classroom. Lecturing method is gradually dominating the teaching methods in schools. This system makes our students redundant as they only copy down notes which they may not flip through till examination periods. It only prepares them for rote learning during examinations and not for knowledge acquisition. An important dimension in teacher education that should be needs urgent attention is the use of instructional materials in the classroom for a better teaching method and for all round development of the child. Ogwu in Ihekoronye (2018) concludes that teachers with adequate knowledge of their subject matter can be more effective and efficient at organizing and delivering the subject matter, connecting the subject with the students’ previous knowledge, finding useful analogies and examples, presenting current thinking on the subject and establishing appropriate emphases.

Use of Educational Media for Effective Teaching and Learning
Modern day children finds it easy to comprehend lesson with instructional materials such as pictures, diagrams, charts, posters, models and mock-ups. Technological devices like radio, television, disc or records, transparencies and overhead projectors make education more productive and thus increase the rate at which students learn. It makes learning more real and immediate through the utilization of already made instructional media like slides, video and audio cassettes. It can supplement the role of a teacher in subject areas where there are shortages of teachers or incompetent hands. Radio broadcast and television programmes extend to a large number of people and can be very useful for distant learning. Educational media can be defined as any device, content materials, methods or experience used for teaching and learning purposes. These include printed and non-printed sensory materials (https://definedterm.com). Ajelabi in Okeze (2016) affirmed that educational media are broad range of information carrying resources that constitute an integral component of classroom teaching and learning and are utilized in an instructional process with the hope of facilitating effective and efficient communication in teaching and learning. Supporting the above view, Ozidi (2018) submits that educational media is the process through which individual become media-literate, able to critically understand the nature, techniques and impact of media messages and productions. This implies that the major task of educational media is to produce optimal combination of media to achieve quality delivery in the classroom. Teaching and learning becomes more real and permanent. Students become more curious, more attentive with a mental picture of concept description and change in behavior as a result of experiences in form of knowledge, attitude and skill acquisition.

The Role of Educational Media in Teaching
- It helps in illustration of ideas, facts, principles or a point
- It also helps to summarize a lesson
- It also helps in motivation of learners
- It encourages more student’s participation in their learning
- It provides more concrete experiences that serve as a basis of thinking, reasoning and problem solving
- To present a large amount of information (ie facts, ideas, principles, data, etc) within a short period of time
- To increase the amount of initial learning and permanency of learning (Muhozia 2014)

Classification of Educational Media
1. Print media, non-print media, and electronic media.
Print media: This is one of the oldest form and basic communication worldwide through which information is widely disseminated with more in-depth reporting and analysis. It is used to display materials such as textbooks, newspapers, magazines journals, official documents etc.

Non-print media: These are instructional materials that have not undergone any form of printing. Examples are projected and non-projected media.

Electronic media: This refers to the modern source of media that can easily be accessed through the internet. It could be described as a new information highway through which we can easily carry out research activities by exploring the web, e-mail etc. examples include visual media, audio media and audio-visual media.

2. Projected and non-projected media.

- Projected media: Projected visual aids are pictures shown upon a screen by use of a certain type of machine such as filmstrip projector, overhead projector or television/Video Cassette Recording (VCR) (Berana, 2016).

- Non-projected media: This type of media are further grouped into two namely: two-dimensional and three dimensional objects. Two dimensional visual media refer to all the materials produced on plain surfaces e.g. drawings, maps, magnetic board, chalkboard, flannel board, pictures, graphs. These instructional materials present plain pictures without thickness. Three-dimensional objects are those that have length, width and thickness. Examples include specimens, dioramas, models and real objects.

3. Visual, audio media, and audio-visual media.

- Visual media: This form of media will simply be seen and touched. It appeals to the sense organs of sight and touch. Examples include computers, display boards, pictures, posters, maps, cartoons.

- Audio media: This form of media carry sounds alone and will simply be heard. Audio media may refer to analog tape, cassettes and digital CDs as well as computer files containing audio in any number of digital formats (https://pcmag.com>term>audio...). Examples of audio media gadgets include radio, telephone, audio tape, video tapes, Mp3, television, public address system.

- Audio-visual media: Audio visual (AV) means processing both a sound and a visual component such as slide tape presentations, films, television, programmes, motion pictures, church services and live theatre productions (https://en.m.wilkipedia.org.) it is a combination of the visual and audio media to produce pictures and sounds in the form of slides or video and video recorded speech or music.
Supervision of Instruction and In-service Training on the use of Instructional Materials for Quality Delivery

Supervision is a vital tool in the hand of the administrator to monitor and evaluate the activities of the teachers to improve students’ learning. The provision of equal opportunity to quality educational programmes for all students depends on the appropriate and well-planned programme. These programmes include a variety of teaching strategies carefully designed to meet the diverse needs of the students in our complex society. Lesson plan preparation and quality lesson delivery does not depend on the amount of efforts the teacher makes but the ability to make the learner want to learn. The cognitive ability of the students differ from one another. Some learn very fast while others learn with practical examples for concretization and retention. Instructional materials stand to fill this gap by removing abstraction and making the lesson real. Constant check on teacher’s lesson notes and monitoring their classroom activities will improve the teaching and learning quality – hence, the need for supervision of instruction.

Glickman et al in Onwuchekwa (2017) define supervision as the school function that improves instruction through direct assistance to teachers, group development, professional development, curriculum development, and action research. In support of the above view, Sergiovanni and Starrat (2002) view supervision as a co-operate venture in which supervisors and teachers engage in dialogue for the purpose of improving instruction which logically should contribute to students improved learning and success. From the foregoing, it could be deduced that the aim of supervision in school is to guide, direct, oversee and to ensure quality delivery of instruction. The role of the supervisor in this context however, metamorphose from checking, guiding and directing the teachers on the use of instructional materials to supporting, caring, flexible activity such as group discussion and staff development through in-service training on instructional programmes.

In-service training of teachers is crucial in determining the extent to which an institution intends to achieve its academic goals. Obiako (2008) defined in-service education as the various training which is aimed at helping the workers like teachers and other professionals to be productive in their area of specialization. Oteh and Akuma (2010) described in-service as the application of appropriate means to promote the professional development of workers while on the job. Asiabaka and Emenalo (2011) stated that most
teachers are half-baked, unqualified and under-trained. Most of them lack skills and knowledge base needed in a dynamic society. They maintained that the situation calls for the need to improve the quantity, quality, skills and attitude of teachers worldwide. Quality instructional delivery lies greatly on the use of tangible teaching aids that are directly accessible to the teacher and the learner via visual, audio, audio-visual, print and non-print materials. The level of the preparedness of the teacher and how well he is equipped with relevant instructional materials for the lesson will enhance quality teaching and learning.

Conclusion
Teaching and learning are Siamese. They are two way traffic that involves free flow of information between the teacher and the learner. The planning is the sole responsibility of the teacher who should put into consideration such factors like instructional materials, educational media and improvisation which will connect the subject areas to real life applications to achieve valued outcomes. Classroom activities should be dominated by students and not the teacher as usual. Constant supervision of teacher’s activities in the classroom is another factor for quality delivery and achievement of desired objective.

Recommendation
In the light of the conclusion drawn from the study, the researcher endeavoured to make some recommendations. These recommendations were aimed at educating school administrators and teachers on how to manage instructional materials through careful selection and skillfully handle the resources for effective teaching and learning.

The researcher therefore recommends that:

- The government should provide instructional materials in schools for quality delivery
- They should establish a resource centre in all the states of the federation for easy access to instructional materials by the school heads.
- Teachers should be encouraged to lay hands on improvised materials and equally teach the students how to produce instructional materials themselves.
- Information on instructional materials will help the publishers to prepare teaching/learning materials.
- School heads should supervise their teachers to ensure availability, utilization and effective maintenance of instructional materials in the classroom.
- Teachers should be in-serviced through workshops, seminars and conferences on the use of instructional materials in order to ensure a good academic achievement.
References