PRODUCING AN INSTRUCTIONAL SOUND/ SLIDES PACKAGE FOR TEACHING POTTERY;A GUIDE FOR TEACHERS

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DECLARATION

This thesis is focussed on the production of an Instructional Sound/Slide Package for Creative Arts as a teaching Aid.

I declare that such a thesis has not been produced for a degree programme. It is an independent study.

I.A. OYABAMBI

CERTIFICATION

I Certify that this thesis is an independent study titled PRODUCING AN INSTRUCTIONAL SOUND/SLIDES PACKAGE FOR TEACHING POTTERY: A GUIDE FOR TEACHERS" submitted by ISAAC AYODELE OYABAMBI. This is in partial fulfilment of the requirements for the Award of the Degree of Master of Education (Instructional Technology) of Ahmadu Bello University, Zaria.

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DEDICATION

In Memory of my dearly beloved brother

Late Deacon, SAMUEL A. OYABAMBI.

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ABSTRACT

The purpose of this packages is to show teachers **how** to produce audio-visual instructional slides for their classroom use.

in teaching and learning within the formal school setting, there is very little use of audio-visual packages. Most teachers rely upon representational and verbal means to attain objectives. The increasing use of audio-visual resources is a further attempt to bring representations of reality to the classroom. If a teacher is to play the role of a learning coordinators successfully into today's schools, he must possess the basic knowledge and skills to present concepts of the subject matter and he must know what instructional packages will help his teaching.

This thesis has been designed to include an instructional guide for teachers, an instructional sound/slide package that is very useful for teaching and learning, it follows the "how to do it yourself processes".

In order to expose the teacher to how to produce slides for their teaching. The instructional sound/ slide package was designed after the study of works of various educationists in the teaching and learning,

Such contributions are reviewed in chapter **two** on related literature, and these include the fields of communication, message, media, educational Technology systematic Approach, Media design and production, and characteristics of instructional packages.

In the area of psychology it includes motivation, feedback, and reward, individuality and response. The chapter on literature review is expected to be useful to teachers, information guide and Methodology of the study were provided in chapter three of this study. The step by step aproach on how to produce slide packages were spelt out for teachers.

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Chapter 1

BACKGROUND TO THE STUDY

A lot of comparative studies have been carried out in the area of choosing instructional packages. In recent years, Educational Methods and Instrumentation have changed at a pace commensurate with the rapid technological advancements in other phases of our society. Each year brings new ideas and new devices, automated teaching machines, televised teaching devices, computer assisted instruction, and slide and sound packages for self-instruction.

The present system of education (6-3-3-4) and the rapid increase in the population of students have created a shortage of qualified teachers in our schools. This shortage can be noticed especially in Science and Vocational subjects.

The disturbing consequences of this shortage can be seen in the poor performance and the number of students who offer these subjects.

Although, a teacher has numerous obligations towards his students and a multiplicity of duties to perform generally, the prime purpose of his effort is to aid the learner in the acquision of knowledge as well as to direct

his training towards the acquisition of skills. Despite this organized method of instruction, many teachers still cling to verbal symbolism as their only medium of instruction. They continue to use only spoken language and thereby appealing to one sense only, that of hearing.

The teachers objective is to convey to students certain ideas, basic knowledge, and information in the shortest possible time and in accordance with the principles of learning. To accomplish this objective, and to aid the learner in retaining knowledge, teaching aids will not replace the teacher, they will make teaching easier and result in grater learning as stated by Shaw (1949). He said,

> "The number of people who can read is small, the number of those who can read to any purpose, much smaller, and the number of those who are too tired after a hard day's work to read enormous. But all except the blind and deaf can see and hear".

In support of this assertion by Shaw, the writer is also of the opinion that in this package the teacher will "tell as well as show".

The use of the senses hearing, seeing, smelling, tasting and feeling serve as the primary means of human learning. What we see and hear influence our behaviour. For teaching at its best, is the stimulation and direction

of learning, what learners look at and listen to are major factors in the effectiveness of learning.

Consequently, the interplay of looking and hearing clearly influence how well people learn. Thus, it can be mentioned that not only the material of learning but also its arrangement, selection and use are essential for human learning. It is startling to realise how many modern audio-visual materials conceived and produced by man are available. For example, the radio for general use made its entry during the 1920s. Television came to Western part of the country around 1959. These and many other instructional devices make it possible for the teacher to stimulate and direct learning at the otherwise unknown.

In a fast developing country like Nigeria, the Secondary School Teacher stands at the vertex of great change. Never in history has change so severally taxed the ingenuity of the classroom teacher at all levels of schooling in his effort to keep abreast of subject content as well as methods of communicating ideas. In some parts of the world around us, teaching has changed from an almost complete dependence on face to face verbal instruction, to automated teaching.

In advanced countries, teachers, through research and experience have learnt that teaching requires knowldge of how to produce, select, and use appropriate new media of communication, in order to explain better the new subject content that their modern development demands. In addition to the traditionally accepted role of the teacher as a professional worker well prepared in subject content as well as in the psychology of learning, his new responsibility to plan efficiently and create an effective communication environment for learning must be considered.

In his new series "Education and Employment in Nigeria" the former Western Nigeria Minister of Education, Awokoya (1975:9) in Sunday Sketch March 25, pointed out that: "Schools are to have adequate facilities including audio-visual materials to enhance the education of students across the country".

1.1 Statement of Problem

There has been a great deal of comments on the falling standard of education. The claim now is that the performance of our primary and secondary school leavers fall short of what was obtained many years back. The country seems to be searching for immediate and adequate solutions to this problem. One of the solutions is the effort to train and up grade the teachers, a step that should make them function better. This could also include the provision of teaching materials or aids which are needed in the schools now.

Indeed, Education planners in this country have been aware of the need for teaching aids in the schools. In the Nigeria National Policy on Education (1977) section 10, Universities and Colleges of Education were charged with the responsibility of producing the needed manpower that would be equipped with the technical know-how needed for handling instructional materials and equipment.

It said in part:

> When all the education philosophy and objectives have been formulated and the resulting policies enacted, when the building have been built, the

> Children enrolled into classes and teachers assigned to them, one task will remain, that is the provision of essential educational services to help both teachers and students in getting quality education and the desired educational goals.

While we note the translation of this policy in terms of the establishment of various audio-visual-aids centres in the late seventies and early eighties, we also noted with sadness the lapses in terms of objectives and the running of these centres which eventually led to their ineffectiveness and eventual collapse. These centres were established without clearly defined objectives. They were poorly equipped, staffed, and starved of adequate financial support. In most cases, officers in these establishments had no clearly defined career structure. As it is even now, schools broadcasting and audio-visual-aid services were established without the schools being equipped with radio, television sets, projection equipment, tape recorder and so on. Atang (1980) was disturbed when he noted that over sixty percent of the soft ware used in our schools were imported from Overseas. In that same year, F.Z. Gana in a lecture delivered during a workshop on Instructional materials, implored fellow professionals

of the direction which the design, production and the use of audio-visual materials should take:

> "As professionals, we know that the efficiency of any instructional materials or aids depends on their relevance to the cultural background and the physical environment of the learner. For us to evolve effective educational media for this country, we must embark upon local production and development of materials and equipment".

He calls for a careful scrutiny of these materials with a view to adapting and or adopting those that are relevant to our needs. A survey of the availability of audio-visual-aids in post primary schools in Ilorin Local Government Area of Kwara State reveals that there is very little in our educational institutions in the way of audio-visuals. Even the few that are available are either badly used or not used at all. This is because most of the teachers lack the necessary technical skill to handle them. Therefore, there is the need for a new orientation towards the production and use of audio-visual-aids in schools.

This study answered the following questions;

1. What are the reasons why teachers are not producing slides?

2. What are the benefits students will derive when taught with slides?

3. How effective are the teachers use of the available teaching aids in their schools?

1.2 Conceptual Framework

Audio-Visual materials have been among the resources for teaching and learning in Educational programmes for many years. Most often they have been secondary to verbal presentations by teachers, to textbooks, to the chalkboards, and to other traditional and more convenient methods of communication. Often they were introduced into a class lesson at the whims of the teachers, perhaps just to occupy spare time. For this reason, audio-visual materials generally have been considered as aids to instruction.

For many people in education audio-visual-aids have been synonymous with the use of films. Many research studies soon showed an increase in learning when a motion picture was added to a lecture as compared with the lecture by itself.

In order to improve teaching, a number of educational film companies have produced quantities of films for

classroom use. There is much concern that education has been missing the mark, that its product - the educated child has not been up to anticipated standard that the emphasis on teaching has somewhat neglected, in order than generalized and verbal ways, the real intent of education; learning, by the learner. With growing awareness, the process of education is shifting emphasis from teaching and the imparting of knowledge, directly from teacher to student, to having greater concern for the learner and his needs, for his interest, and for ways to structure instruction and motivate him, so he will be an active participator in the process of learning.

The new emphasis has made educators alert and active in serving such concerns as these. That students differ greatly in their ability to perceive and learn and in their individual requirements for learning. Some learn easily and rapidly from printed or oral presentations, with a minimum of more "direct" experiences. Other require experiences that are more concrete including the use of visual media. Most students require a combination of various avenues to learning.

1. That many cultural factors affect learning. Students need a whole range of experiences involving real things, visual representations and abstract symbols.

2. The new ways to organize subject content encourage greater participation in the learning activity through discovery and inquiry methods.

3. That instructional programmes themselves need to be organized interms of efficient and flexible use of spaces, time, personnel and selection and preparation of instructional materials that fit the learning experiences and methods.

-Test the materials with a sampling learner.
-Revise materials as necessary to satisfy objectives.
-Carry out the instruction.
-Evaluate the results.

This approach to teaching and learning is developed around specificity - specificity interms of behaviour objectives to serve the needs of particular students.

1.3 Objectives of The Study

The study is intended to achieve the following objectives.

1. To enable teachers see practically how slides and the accompanying sound are produced.
2. To enhance interest in teaching and encourage creativity among teachers.
3. To develop and promote an effective use of innovative materials in schools as demonstrated by the production and utilisation of sound slide packages.
4. To make contribution to the production of sound/slide packages for use in Secondary Schools.

1.4 Assumptions

The problem of Audio-Visual materials is not peculiar to one school. Evidence has shown that it is a nation-wide problem. The students are used to conventional teaching. Most teachers are not exposed to the use of Audio-Visual materials. It is hoped, that this study will acquaint them with the methods and procedure for making and consequently using sound/slide

packages for teaching.

It is assumed that face to face teaching will change with the passage of time or be reduced, considerably, giving way to Audio-Visual materials which will be used to keep abreast with changes.

It is assumed that Nigeria, with its human, financial and political resources can afford to adopt more effective approaches to the education of her children.

It is assumed that educational technology is now considered to be a major concept, with an orientation that can help teachers to provide reasonable means and resources to enrich our schools.

1.5 Justification For The Study

There are evidences all over the institutions of learning at different levels indicating that whenever sound/slides are used to teach students, the result has always been positive. Unfortunately, there is no record of any deliberate attempt in the past to show that sound/slide packages have been produced to teach the students in some of the schools visited in Ilorin Local Government Area of Kwara State. The study is therefore necessary for

the purpose of investigating the reason for this abnormality.

It has been revealed that teachers are not exposed to the use of teaching aids especially when it comes to the modern media, hard and soft wares, such as projectors, recorders, transperancies, charts, slides, and equipment. This study is aimed at instructing teachers on how to produce and use sound/slide packages to enhance better teaching. Primary and Secondary School levels of Education are the concern of the majority of people, but most of what is learnt is taught in abstract. It is of the utmost importance that the recipients of primary and secondary school education be exposed to the kinds of experiences and environments that would enable them to develop their potentials so as to be useful to themselves and to the society.

Of all the five senses, the most commonly used are the eyes, taking about 75 to 80 percent of the information we take in, followed by our ears taking between 10 and 15 percent and the remaining senses take the remaining percentages. As a result, when the term audio-Visual is used, it refers to the aid that will enable one to get most of the information across to users, making them to learn faster and remember longer. However, a survey of our

classroom situation shows that the teacher goes into the classroom and talks appealing to only one sense of hearing which allows for about 10 percent of what we can learn at a time. In order to expand this opportunity, the visual dimension has to be introduced. And that is the focus of this study; to stress that Audio-Visual or Sound/Slides in the classroom are important, and that teachers should learn to produce their own packages using local resources.

Learning is a change in behaviour and audio-visual aids normally help in this dimension. To be usefully, Audio-Visual Aids must be tailored to the needs and background of learners. For this reason, it is important to learn how to produce and use sound slide packages. The more involved the senses are, the better opportunity learners have in retaining what they learn. The more practice teachers have in preparing their own Audio-Visual materials, the more encouraged they will become in teaching.

1.6 Delimitation

The study has some constraints:

i. Problems of utilisation of efficient projector. It was difficult to come by a working projector in schools.

ii. Problem of technical issues e.g. light fluctuations caused delays, chemicals and films are hard to find, and when they are available they are very costly.

1.7 Limitation

In order to obtain maximum result from the investigation, the study was restricted to a few teachers from some selected schools in Ilorin Local Government Area of Kwara State, where Creative Arts is taught and facilities are available. The study is restricted to teachers from selected Post-primary Schools because this group is more likely to have the equipment and materials for slides production.

1.8 Definition of Terms

Attitude: The concept of attitude arises from attempts to account for observed regularities in the behaviour of individual persons. The quality of one's attitudes is judged from the observable, evaluative responses he tends to make. The major determinant of most of individual's attitude is communication from other people.

Film Strips: Filmstrip is defined as a length of film containing frames of still pictures which are projected on a screen, usually as a visual aid in lecture.

Medium: Medium is referred to as the code channel, symbol, signal, language transmitter, gesture, and etc. This is the vehicle by which the message of meaning is conveyed or expressed to the receiver.

Message: A message is behaviour available in physical form. It is the translation of ideas, purposes, and needs into

a code. A message may be in verbal or non-verbal form, gestural, written, graphic or in any other form available.

Models: Models are three dimensional representations of the real thing. A model may be larger, smaller, or same size as the object it represents.

Motivation: Clark Hull defined Motivation as the factors which regulate and energize behaviour, i.e. keeping the mind ready towards achieving goals and satisfies it. The motivation may be inside you or outside. It may be aroused either from within or outside.

Real Things: Are objects such as coins, tools, plants, animals and etc. These are always thought of as visuals, Real things can be defined as concrete objects.

Slide: The term slide refers to a small format photographic transparency individually mounted for one - at-a time projection. The size of slide most frequently encountered in

Educational use is 2 by 2 in, either 50 by 50 mm or 5 by 5 cm measured by the outer dimensions of the slide mount.

Local Craft: Indigeneous art and craft which have survived with indigenous religion and which is devoid of European influence e.g. pot making, basket making, smithing and etc.

Chapter 2

REVIEW OF RELATED LITERATURE

2.0 Introduction

Much has been written about the utilisation of media for instruction but little has been done in the area of production of these audio-visual-aids. This review focusses on what scholars and research findings say about design and production of instructional packages. The impact of these instructional packages on students, and the benefit the teachers derive from producing the packages in their teaching activities will be emphasised.

2.1 Teaching and Learning

Gege (1978:14) describes teaching as any activity on the part of one person intended to facilitate learning on the part of another. Smith (1971:20) similarly conceived teaching as a succession of acts by an individual whose purpose is either to show other persons how to do something or to inform them that something is the case. These definitions and others indicate that learning will result from teaching and student achievement is the key word to

justify this. That is, the focus of how teaching is perceived here is best understood through students' achievement.

Another angle from which the term teaching can be viewed is through decision makings. Shavelson (1976) conceives teaching as a process by which teachers make and carry out reasonable decisions with the intent of maximizing students knowledge of school subjects and their ability to solve problems. In this definition, the main thrust of how teaching is perceived is on the teachers' plan and decision-making in the act of teaching. Other scholars Shulman and Elstein, (1975); and Lampert (1985) agree with this definition. For instance, Lampert agrees that teachers' decision making can reconcile the demands of students intellectual and emotional needs with that of acculturating practices of the wider community.

Lovell (1973) defines learning as a change in behaviour which results from activity, training or observation. He goes further to say that the learning must have taken place when there is a change in behaiour is not enough, and that such a change must persist for a while. Learning occurs in many different

situations; for example, in connection with memorisation, the acquisition of physical or intellectual skills, solving problems, learning by trial and error, and so on.

Learning here is taken to include acquisition of new social skills, development of changed attitudes towards oneself and others, changed capacity to experience and tolerate emotions, development of goals and aspirations. This kind of conceptualization of learning process has been spelt out more fully by Blakely (1972) He says students learn how to learn, when to learn and whether to learn. Learning is not passive, but consist of a creative process of selection and reorganization. That is why Blakely (1972) says that the mind can thus be thought of as an instrument for learning.

2.1.1 Teaching Strategies

The modern teacher has to be a professional, keeping abreast of the innovations and teaching methods like any soldier keeping up-to-date in approach to warfare. As such, the teacher judges situation and decides which tactics would be most suitable for the prevailing circumstances.

Awoniyi (1979) says that: "To be effective the teacher has to be many things at the time; a source of information a guide, an organizer of opportunities for learning, some one who can structure a suitable environment for learning, a supervisor and a consultant".

We understand from this statement that the title, "Teachers may be a little misleading. A teacher is an active agent in the dissemination of information which leads to education. Learning is a co-operative effort involving both pupils and the teacher. The teacher's broad role should be seen as one which provides the necessary freedom, security, and guidance. To do this, he should always be conversant with current strategies in education.

There are many teaching strategies which the teacher can use in his teaching. These include the lecture method, play way method, project method, discovery method, and demonstration methods.

1. Lecture Method:

The method is suitable for more mature students, like those in the Universities and other higher institutions. The teacher prepare a body of information which he

delivers to the students with little or no interruptions. In this method, students are invitably reduced to being mere listeners and note-takers

Advantages and Disadvantages of Lecture method are:-

Advantages

(a) It helps the teaching of the skills of listening and clear thinking.

(b) It helps ability to reason.

(c) It helps to keep physically inactive students intellectually active, alert, and attentive.

Disadvantages:

(a) It makes the lesson dull and boring.

(b) It leads to lack of attention on the part of the students.

(c) It encourages rote-learning.

2. Play-way Method:

Play is important to every one's life particularly that of the child. The saying that "all work and no play makes Jack a dull boy" is true to a large extent. The

concept of play has developed over the years beyond understanding, it is not just a means of relieving boredom; it now seen equally as an important element in learning. Almost evey subject has a potential play angle, with considerable educational value in this. Play is the child's first experience of life. It widens his horizons, enabling him to come into contact with other children and material things. Dewey approvingly summarized one of Froebel's principles like this:

> "That the primary root of all educative activity is in instinctive, impulsive attitude and activities of the child, and not in presentation and application of external material, whether through the ideas of others or through the senses; and that, accordingly, numberless spontaneous activities of children, plays games, music efforts, even the apparently meaningless motions of infants-exhibitions previously ignored as grival, futile or even condemned as positively evil are capable of educational use hay; are the foundation stones of educational method" (23:117).

3. Project Method:

John Dewey's argument was that children prepare for life by taking part in the life of the village and wider neighbourhood in which they live: that it is

social activity that really educate children. Dewey's ideas were developed by his followers into what is now popularly known as the project method.

A project is the co-operative study of a real life situation by a class or even by a whole school, under the guidance of the teacher. A project aims to do three things.

-To bring children into real contact with the activities of the school neighbourhood.

-To present children with 'real life' problems which they solve by thinking and working together.

-To develop further skills and new knowledge in school subjects while working at the project.

-To serve as a link between school and community.

A Project may last a whole term or may be completed in two or four weeks. An example of a project for pupils might be building a status of a very important man in the village with cement.

Advantages of the Project Method are:

1. It captures the enthusiasm of many children, stimulates their initiative and encourages the spirit of inquiry.

2. Children learn to plan and co-operate with each other, which is good social training.

3. They come into close contact with the problems of real life.

Disadvantages are:

1. There is not certainty that all the children will be interested or that all of them will take part fully in the work.

2. Some subjects of the curriculum will be neglected.

3. The individual may be neglected by the emphasis on social activity.

4. It takes time to organize.

4. Demonstration Method:

In subjects like languages, arts, the Sciences, as well as game and Sports, there is a limit to the amount of talking a good teacher can do. There comes a stage when he has to demonstrates his intention so as to encourage the pupils. Example is better than precepts. Where special skills are required to teacher may invite a resource person, a specialist to give a practical demonstration such as in music, drama, games, and sports.

5. Individualisation of Instruction:

The teacher provide pieces of apparatus which the children could use themselves with the aid of the teacher. The pupils are free to play and work as they please. In Nigeria, where a teacher has to cope with sixty children, this is hardly practicable. The problems are clear; because the class is larger, discipline is difficult to maintain, and the teacher may find it correspondingly difficult to provide adequate attention for these children with special problems.

2.1.2 Teaching With Audio-Visual-Aids

A common goal of teachers is to make lesson presentations vital, alive and lasting. Every committed teacher seeks to convey to students certain ideas basic information and knowledge in the shortest possible time and in accordance with the principles of learning. For this reason, new methods and approaches are continually being sought to overcome the limitations of exclusively verbal communication. Current research and in technology have given rise to the adoption of improve methods of teaching and learning. These new methods have become essential as traditional methods have been found to be

deficient in meeting today's needs. According to F.Z. Gana (1980), the common goal of teaching is to effect changes in people. These changes can only come as a result of sincere understanding of the teaching learning situation. Moreover, one of the facts of modern life is the dependance upon technical devices for doing many things that need to be done. Every worker is faced with learning about new tools for doing his or her own job, and teachers and other training specialists are no exception.

However, as teachers and instructors increasingly realise the need for teaching materials we must emphasise that these teaching aids are not aimed at replacing the teachers, rather, they are aimed at making him function better, thus making his job more meaningful and interesting.

2.1.3 Audio-Visual-Aids And Their Impact on Teaching and Learning

The term Audio-Visual came to general use during the nineteen thirteies (1930's) and reached a high level of acceptance during and after world War II (Wayman, 1976). At this time it was thought necessary to employ as much

as possible non-verbal media to transmit information and educate soldiers and civilians a like within the shortest possible time. The experience paid off so handsomely that after the war, schools were encouraged to use as much of these media as possible for instruction.

Gana (1980) explains that "the two components of the term are 'Audio' meaning hearing and 'Visual' which means to see. The combined meaning therefore would be "hearing and seeing" aids which convey information through any or both of these senses. Interchangeably used with this term is aids and "materials". Thus it is common to refer to Audio-Visual-Aids as audio-visual materials, other acceptable terms used in the field include instructional communications technology and Instructional Technology. According to his definition, a textbook does not fall into the category of auidio-visual grouping but a text illustration does. Some Audio-Visual activities include fieldtrips, dramatizing an event or demonstrating a procedure. Some, like a motion picture, or a frlmstrip required the use of equipment to release their latent value. Others like an exhibit or a study print need little or no equipment. Audio-Visual materials include tape and disc audio recordings even

though they are more audio than visual.

The argument for teaching aids stems from more embracing question, why do we need to apply media to the business of education today? What has happened to the available human resources in our society? Have they proved in ineffective? F.Z. Gana (1980) offers the following reasons:-

1. That myriads of researches that have been conducted to the mechanic of learning have revealed that any instructional process which evokes the involvement of as many of the human sensory organs tends to facilitate the permanency of learning.

2. The pressing problems of the evolution of rising expectation have sparked off and sharpened tastes and demand for quality of education by all.

3. Knowledge explosion.

4. The stagering rate of population explosion.

5. The impact of the mass media-the radio, television, the press, and the cinema, resulting from the booming electronics industry.

6. The impact of collective bargaining trade unionism.

7. The drive towards accountability and cost effectiveness as applied to expenditure in education.

These factors have necessitated the search for better and more efficient methods of instruction. In short, it means the search for alternative methods of teaching. The search which had led to the experimentation with and the development of instructional materials which emphasise the following elements:

1. The learner centred curriculum.

2. Activities rather than passivity.

3. Exchange of information and experiences rather than dissemination.

4. The application of technologies which emphasize self-instructional processes.

5. Innovative instructional systems the core curriculum, the integrated and correlated curriculum, the open access classrooms, the ungraded schools, team teaching and etc.

2.2 A Systematic Approach

Efforts have been directed towards producing specific materials for specific instructional needs, the development of the packages for instruction must be done in such a systematic way as to make sure the needs are met. Waldron (1973) defines systematic approach as the design of instruction, a problem solving process, which requires the identification of instructional problems or needs and corresponding solution by means of effective and efficient teaching learning activities based on relevant objectives.

Gagne and Briggs (1974) highight the purpose of the systematic approach as that of encouraging the setting of a design objective providing a way of knowing when the objective is met. Other scholars mentioned the usefulness of the systematic approach in the planning and organization for effective design and development. Devis (1971), Ronuszaski (1981), Heinich (1982), and Branson (1978) lay emphasis on the following instructional design models of descriptive, prescriptive or explanatory elements in varying degrees.

Andrews and Goodson (1980) point out that some models describe the components or activities of instruction, but are used as if they prescribe the necessary activities and are sometimes presented as prescriptions. Some models have such a strong basis in learning theory that they tend to explain instructional design in terms of the events of learning. Andrews and Goodson (1981) use forty models which come from a variety of sources. They were divided into categories based on the models' most pertinent characteristic. They discussed the purposes and uses of these models and offered an explanation as to why so many different models exist. They found out three main categories around which the purposes and uses of a model centres.

- teaching of instructional design process
- production of viable instructional product
- reduction in cost of education.

Diana Cari (1977) in her own explanation points out that most instructional development models make provision for the following areas:

(a) needs assessment and goal generation,

(b) learner analysis known as audience analysis, content identification, objective identification.

(c) formative and summative evaluation.

Burton and Merill (1977), Corl (1977) support this view and go further to say that; "needs assessment should be the first step in a systematic approach to instructional packages development".

Andrews and Goddson (1980) do not find out the needs assessment but assume that a broadly defined or stated learner needs has been identified, that is need assessment (analysis), learner analysis, and task analysis taken together, thus constituting a kind of definition stage of instructional development process.

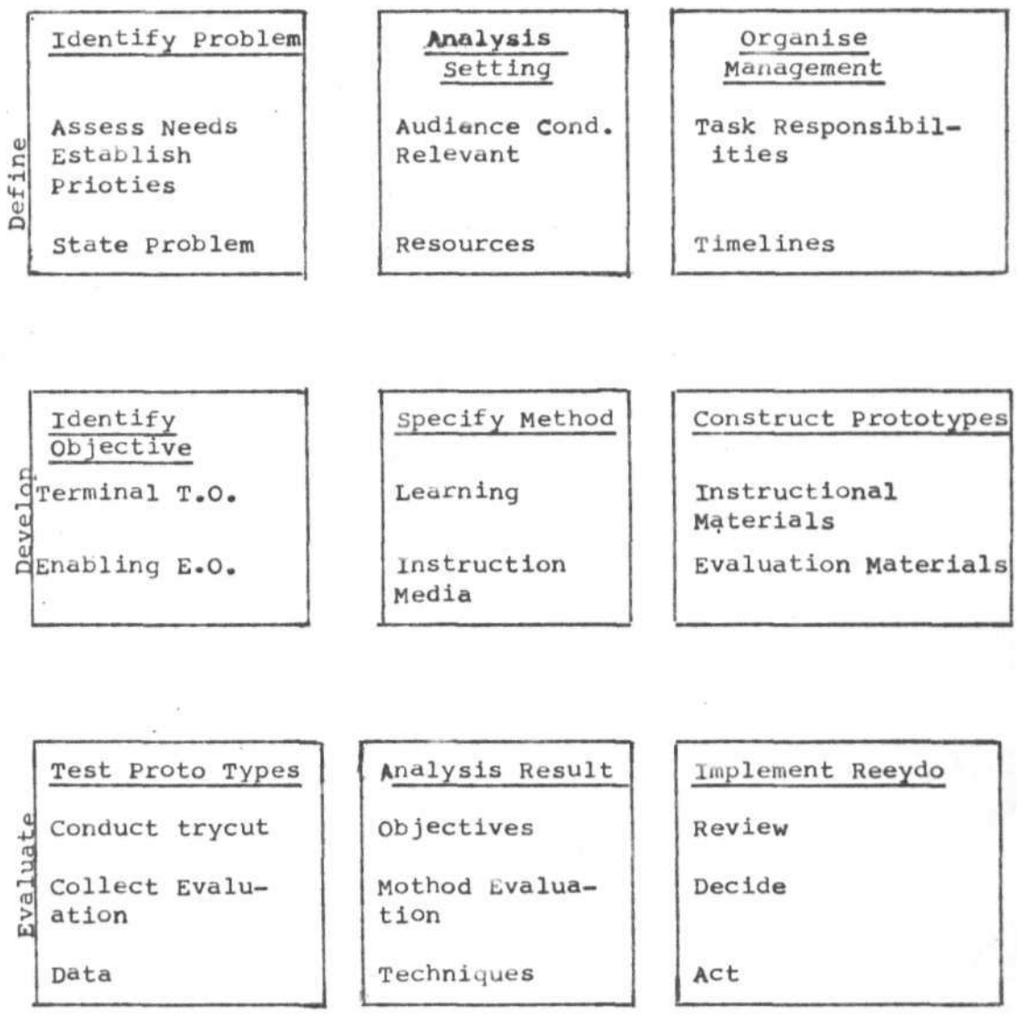
From the views expressed by the scholars above, one tends to agree that before a meaningful instructional development take place, three broad areas known as D - D - E.

D Means Define

D Means Develop

E Means Evaluate.

Fig. 2:1 Steps in the Instructional Development Process



Adapted from the Indiana University (1974) Instructional Development Project Guide Book (I.D.P.G.)

2.2.1 Instructional Packages

There are many types of instructional packages According to Deppe et al (1963) instructional packages include transparencies, slides, tapes, recordings, displays, posters, turnover, charts television, models, opaque projections, still or flat pictures, electric boards, bulletin boards, illustrated booklets and computer assisted instruction. They combine print and visual media to help tap both subjective feeling and objective attractions and thus provide the learner with a new metaphor for expanding the understanding of the Universe and ourselves.

Norton (1985) says that, instructional packages are produced to achieve specific objectives which describe what students will learn at the end of the product. They are produced to offer replicable instructions.

2.2.2 Characteristics of Instructional Packages

Paul W. Kirby and Devies Jr. (1975) give the following characteristics of instructional packages:

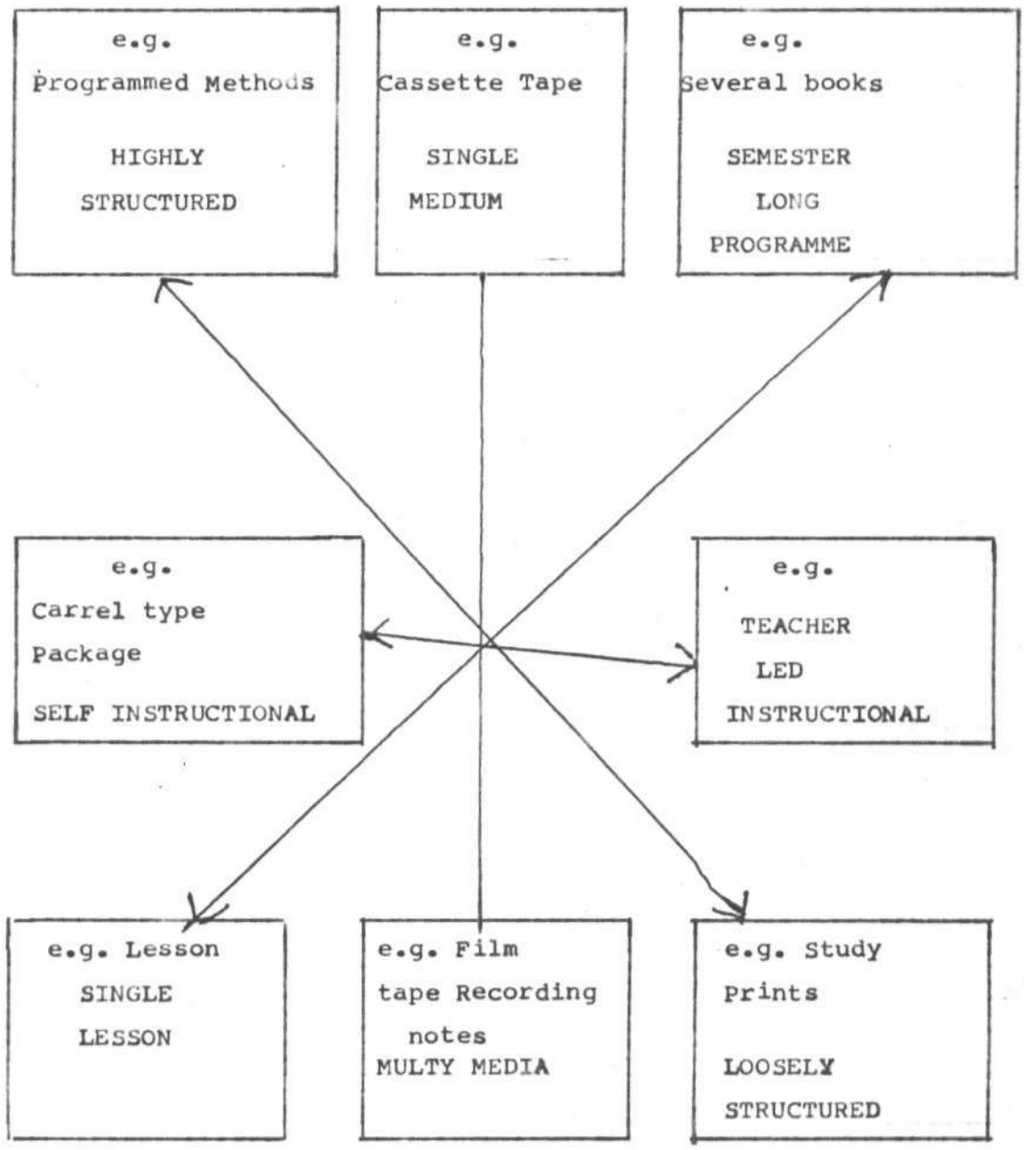
1. Instructional packages are conceived as programmes not ideas in order to create a new curriculum and not just to have interesting accessories.

2. Instructional packages are a system of closely related materials and instructional media each serving a particular purpose. We have textbooks, films, exercises, laboratory note books, booklets, equipment and recordings. Each component is integrated to the system emitting one would be to deny the validity and frustrate the impact of the packaging concept is not new, but has been the standard for many years, for example the text-book contain instruction which are broken into "lesson Units" accompanied by visuals, exercises, activities, questions and answers. The textbook packaging is incomplete packaging concept by contemporary standard because it is only one of many materials that are appropriate for instructional purposes and it was likely developed independent of these materials even if additional media accompany it, the media plays supporting roles.

2.2.3 Individualised Instruction And Learning Packages

Individual instructional learning packages have various issues. It is notable that the concept of individualised instruction developed from research findings each as it affects individual learners differences in learning, variability in human development, importance of activity, and the effect of active interaction with learning materials.

Fig. 2.2: Types of Instructional Products



Types of Instructional products produced from Instructional Development Project Guidebook (I.D.P.G.) Indiana University, (1977).

There are evidences to show that different packages have been produced by different groups in different places, using various formats and having a variety of goals.

Keuscher (1975) in his article "Individualization of Instruction". What it is and what it isn't says;

> "Individualising instruction along the lines of diagnosis and prescription, pre-testing and post-testing through behavioural objectives, is a manipulative method of teaching. It stresses what is to be taught and how it is to be taught with little or no regard for the reelings of the individual".

Perhaps this is where the teacher's role come in. Packages alone cannot take the teacher's place for only humanbeings are capable of recognising the reeling of the learners and help them to learn. The I.A.P. (Learning Activity Package) the PLAN (programme for Learning in Accordance with Needs) and others follow the same format of definition of title, component, prerequisite knowledge, self assessment and evaluation, post-test and revision. Rather than individualised instruction, Keusher suggests personalised instruction, where students are given the materials and are allowed to interract with them, while the

teacher plays the role of guidance. Controversy has developed from Keuscher's assertions. In his assertion of packages, he says that most materials and programmes marketed in the name of individualisation do very little over and beyond adjusting the pace at which a student wades through prescribed assignments, some go fast than others. Another indictment of must materials is that they teach only those facts that are going to show up on the test. Both information and answers are decided before hand by some all knowing person or group of people who, although they do not know, have never seen, nor will ever see the pupil; have decided what he should learn and how he should learn it. Keuscher's opinion should not be over looked. Considering the general themes of education goals, which is, to develop an instructional system which gives maximum individual fulfillment. Educators agree with this general goal stated by Jean Piaget that:

> "The principal goal of education is to produce men who are capable of doing new things, not simply repeating what other generations have done, men who are capable of creating thinking in discovering new innovation that affects the needs of pupils who are active in discovering things for themselves and not adopting new ways of learning without sufficient understanding.

John Bolvin (1975) believes that outcomes of learning are to be specified, for example, if creativity, inquiry, complex reasoning and open mindedness are desired aspects of human learning then they should be recognised as accessible goals and specified as observable competencies. He also goes further that detailed diagnosis is to be made of the initial state in which learner comes into a particular instructional situation. Without this initial learning characteristics assessment, any educational procedure is presumptions.

In conclusion, learning packages in order to be most effectively utilised, require the teacher as a guide and not instructor. This is the goal of this study.

2.3 Management of Learning Packages

Smith and Kapfer (1972) discussing about packages say that classroom management of learning packages, whether used in individual settings or in group instructional situations, require student behaviours that differ from the conventional expectations. It is difficult but not impossible for a teacher who has had little experience with individualised learning package programmes

to visualise and anticipate new behavioural competencies. Such learning comptencies that a teacher should expect are as follows:

1. Reading, listening to or looking at the learning package.
2. Following the direction given
3. Using resources available in the package and finding their own resources.
4. Deciding when they have learnt sufficiently.

Learners must keep to the above rules. The teacher must be able to use his initiative to adapt the packages to the individual and collective differences of his students.

Lucille Smith and Kapfer (1972) give a general rule to teachers thus:

> Teachers or package writers can promote greater self-motivated learning in at least two ways, first, they can make sure that the learning activities in the package include experience with concrete or real things that are available or can be made available in the school, or in the community. Second, the content of learning packages can be related whenever possible, to situations in which the content to be learned can be applied immediately.

The important point here is that the usefulness of a specified skill should be immediately real and motivating.

2.3.1 Self Teaching Systems

Self teaching or independent study is not synonymous with self or individualised instruction. Tosti and Harmon (1972) highlight the difference between the two. In their view, it is possible to give every student a programme instruction text which they take home and work, on, to enable them prepare for examination or test. They say that, if that is all, it could not have made much difference from the individualisation afforded by conventional lecture. However, they content that self study or independant study programmes may permit more individualisation than lecture system. This means that the learner can re-read, reply, review, the notes, tapes, slides, or films, at his own time.

Several studies have indicated that going at ones own rate is the best aspect of advice for pupils learning participation. This is further supported by the contribution of learning particpation popular between 1954 and 1969. This has been accepted as the key factor in effective learning.

Gilbert (1958); Holland (1959); Kersh (1962) come up with atternatives to active learning such as direct

self-inquiry methods, learning to self-teaching packages. One should recognise that self-teaching system is one in which the student actively takes part for his own progress.

The following steps should include:

1. Analysis of the course in terms of result for the learners.
2. Consideration of available technique or methods.
3. Evaluation and revision of the course.

2.3.2 Results of Self Teaching Systems

This has been described by Mager (1962) Popham and Baker (1970) classification of Educational objectives by Bloom (1956) on formulation of objectives, and much has been written on their merits and demerits. Ormell (1973) says that independent study involves active participation in learning. When a package is prepared with ample consideration of the steps suggested above, learning, either independent or in a classroom setting, will yield the desired effects.

A good example of a self-teaching or independent study was developed by F.S. Keller entitled "Goodbye Teacher Kerler (1968). The system advocates the use of a sequential set of self study units pursued by each student at his own pace.

Keller's plan is distinguished from conventional teaching procedures in the following ways:

1. The student moves through the course at his own pace.
2. The student moves on to new materials only after demonstrating mastery of previous work.
3. Lecutures and demonstrations are used for motivation rather than as a source of critical information.
4. The written word is stressed in teacher-student communication.
5. Repeated testing, immediate scoring and tutoring enhance the personal social aspect of the process.

In order to utilise part of Keller's plan he suggests that at each stage the learner could assess himself. Hill (1976) states that no teaching or learning

method could succeed without a proper consideration of the main participants, that is, the students and the teachers.

The following constitute the main areas that stand out clearly, according to Hill, when the relationship between teachers and students is considered.

1. Better communication and understanding between students and teachers

2. Better and more appropriate teaching methods employed by teachers. Other areas to consider are:-

   (a) Need for clear aim and objectives in course of study.

   (b) Greater awareness and use of variety of assessment methods.

   (c) Feedback to both parties.

   (d) Need for teachers to show mastery and enthusiasm of their subject and for students to be motivated and shown the relevance of a material to their profession.

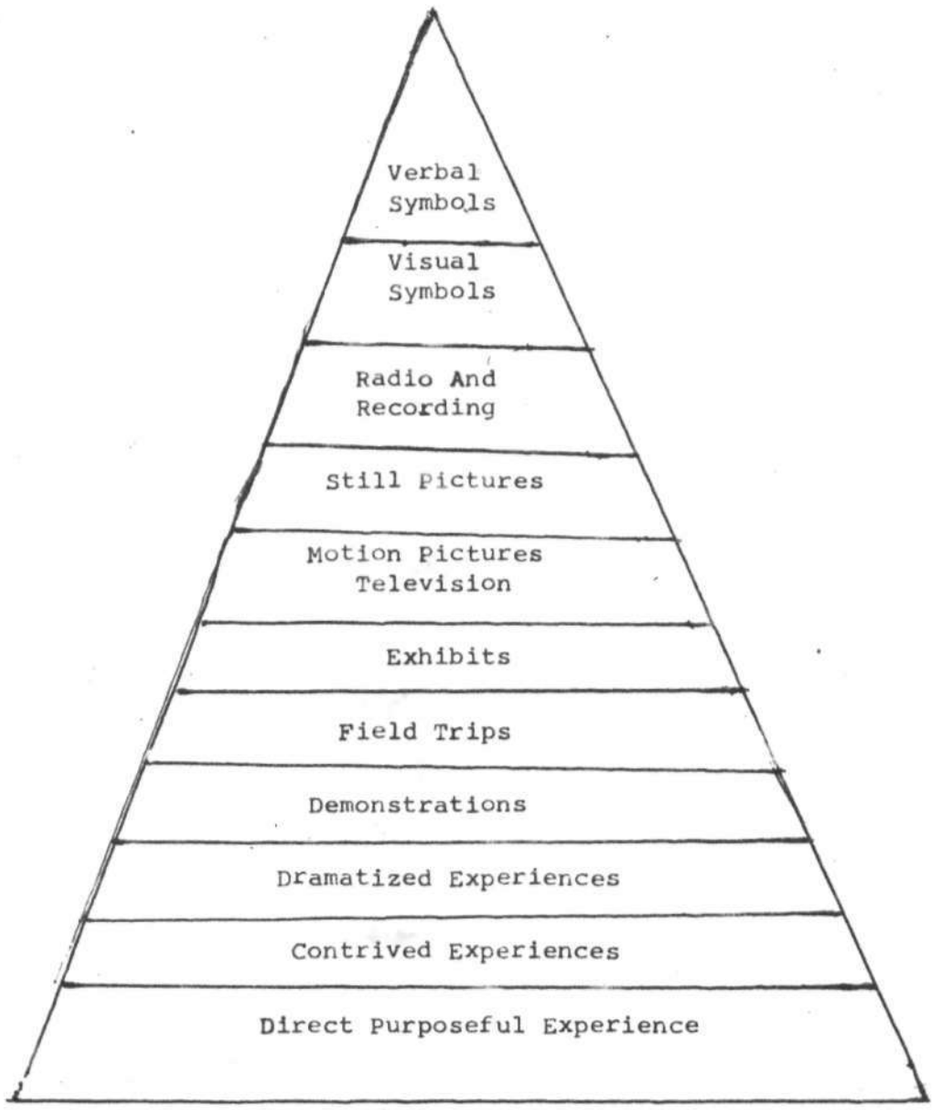
He observes that teacher and student appear to advocate for a closer look into the self teaching process interms of the individual and to see what methods and techniques can best achieve this. Independent study or self-teaching system, rather than excluding the teacher, actually includes the teacher guiding the students in making their own decision, sticking to it and being ready to bear the consequences, this is an active participation in learning. In accordance with the above specifications, this package is being designed for use both as an independent learning package and also as a guide book for teachers who want to foster individualisation in the classroom. Instructions are therefore given both to individual learners and teachers as the case may be.

2.4 Media in Education

Gibson's pictorial perception theory (1954) suggests that pictures and models are better stimuli than words and symbols for learning about concrete things. Dale's cone of experience (1969) proposes the teaching of concepts from concrete to abstract. He builds a pyramid of eleven steps from the most abstract to the most concrete

experience. He utilizes different instructional media in a hierarchical form to present a continum of learning experiences. The effectiveness of media in their innate qualities of presenting reality to the learner was made use of as shown in Fig. 2.3.

Fig. 2.3: Cone of Experiences



Edgar Dale's "Cone of Experiences Adapted from Audio-Visual-Methods in Teaching. New York Durydein Press (1969) 3rd Ed.

1. The most abstact concept of the cone is the verbal symbol found at the Pinnacle. It involves only verbal communication.

2. Visual symbols deal with image representation in the form of maps, diagrams, charts, graphs, and still pictures. Combined with verbal symbols, they are more effective than verbal symbol alone.

3. Recordings, radio, and still pictures are visual and auditory devices. They are used to provide learning experiences for large numbers of people and those who cannot read, thus they add more reality to the learning situation.

4. Motion pictures can bring the world to the classroom. The films may be silent or combine sight with sound. A reconstructed reality of the past or difficult experiments can be brought to class through motion pictures.

5. Television is capable of accommodating many media- motion pictures, diagrams, charts slides, filmstrip, photographs and so on. It helps to communicate effectively without much word reading skill.

6. Exhibits consist of the display of learning materials in the form of pasted photogrphs, pictures, charts, models, posters, and cartoons. In places where the real objects cannot be seen, the displayed photographs would create a comparable impression more so, if they are in colour.

7. Field trips are carried out in the form of exeursions, visits, and expeditions. It is a technique whereby the class is taken to places where they can obtain first hand experience with the subject matter. A creative Arts class could make an excursion to a museum to see and learn for themselves after studying different forms of Arts works theorically in the classroom.

8. Demonstrations provide more concrete experiences to fieldtrips and exhibits. They are effective experiences especially in psychomotor tasks.

9. Dramatized experiences bring about creativity in participants. They are role playing activities in which participants participate in a reconstructed experience.

10. Contrived experiences deal with a representation that differs from the original in size, complexity, or both. At this level, models of realistic objects are used for teaching.

11. Direct, purposesful experience is learning by doing. It provided direct and first hand experience. Learners are participants in the learning event.

Dwyer (1967) explains that the realism theory regard learning as being more effective when it extends from the object or the situation itself of to a simplified abstraction of it. That mean that a learning situation, for example can be depicted from a motion picture with colour and sound through a photograph to verbal description. The contention is that the more qualities a visual shares with the object or situation to be depicted, the more realistic the visual, and therefore, the easier the learning process for the students.

Miller et al (1957); Broadbeut (1958) and Traver et al (1964) extend the realism theory to include the use of stimuli and cues to aid learning. They point out that excessive addition of realistic cues or stimuli might be distracting to learning. Learners, to them, do not need wealth of stimuli or cues in order to recognise the attribute of an object or situation. They conclude that merely confronting a person with stimuli identical to those emitted by the ral environment is no guarantee that useful information will be retained.

In summary, Educational Technology builds a bridge between Educational theory and practice. They provide a communication link between the teachers and learners

through the use of stimuli or cues thereby making learning more realistic. Exposing the learner to too many instructional media might lead to little or no additional learning at a particular point. There is therefore the need to know the attributed of each media vis-a-vis their use, so that the right type might be selected for a particular learning situation.

2.4.1. Attributes of Instructional Media

(a) Printed Materials

According to Haney and Ullmer (1970), the bookprint form the pivot of mass education.

Erickson, (1965) describes the bookprint as the medium of instruction that everybody is accustomed to Gagne (1970) expresses that the amount of dependence on books as media of instruction is very high relative to other media. Green (1965) also comments that the textbook provides in reality accessible form, that body of knowledge required by students in particular subject.

Weaver and Bolinger (1949) conclude that:

> "the average teacher needs help, and textbook appears to give the most tangible assistance".

(b) Picturees

Smith and Smith (1966) comment that the picture serves as a memory device to facilitate recall of significant features. It facilitates learning by helping to organise the materials to be learnt. Pictorial symbols to them should be as realistic is possible but not to have excessive details. Therefore, care must be taken in selecting and using pictures and graphic material especially in books prepared for lower classes.

(c) Newspapers, Cut outs, Journals and Magazines:

Brown (1977) expresses that they serve to present current events, study analysis and promote improvement in reading and discussions.

(d) Audio-Visual Materials:

Studies conducted by Rubon (1963) Armspiger (1933) and Meierbenry (1962) show that the advantages of learning through sound films over the use of traditional materials varied from 12 to

50 percent in areas of science, the social studies, and music. On retention of cognitive information, they report that information learned by film is remembered longer than cognitive knowledge presented through traditional verbal materials. When a filmed sequence precedes a verbal sequence, the concept is better learned than when the opposite order is the case.

Among the attributes of the film is that they can illustrate better than verbal explanation or printed photographs, various phenomena and processes which a student might otherwise have difficulty in grasping. Apart from providing opportunities for directed observation, they present descriptive materials which we need a great deal in schools and colleges.

2.4.2 Utilisation of Media

According to Agency for Instructional Technology Newsletter (1988:14), a typical package is structured into four sections:-

1. Introduction, which focusses on the instructional path.
2. Example, which involves a demonstration of critical skills.

3. Application, where critical skills in concept are practised.

4. Follow-up, where provision is made for reinforcement.

Cable (1979: 9) suggests that, after the production of materials the teacher needs to do an individual formative evaluation, so the necessary revisions may be made before their introduction to the classroom. He further says that a further evaluation is also required to determine the materials' effectiveness in the classroom. He also reminds us that instructional materials are no substitutes for the teacher, instead they depend on his skillful employment which involves a lot of energy and imagination and his ability to know what materials he can expect to make.

Steiner (1980) says that learning is acting and deciding which results in knowing what and knowing how students need to actively participate (asking questions, and making comments). Wann et al (1962: 99) explains that children's spontaneous interest alone cannot be expected to lead them into all areas of knowledge, they also need

to explore in order to interprete today's world.

Finally, according to the Miller Dolland models of learning, there has to be a motive on the part of the students, the teacher must provide a stimulus, the student has to respond and at the end be rewarded or get something as a consequence of his response.

2.4.3. Media And Teaching In Nigeria

Studies conducted by some scholars in the field of Educational Technology, Ogunlana (1977); Ayo Ogunranti (1978). Heastrup (1981); Soremekun (1979); Nwabuoku (1982); Oluyitan (1982); Okapala (1981) and Iman (1982) on media and teaching revealed that only a few types of instructional media are available in our schools.

Ogunlana (1977) and Iman (1982) find out that there was a general paucity of essential illustrative media through textbooks and that chalkboard are usually available. Heastrup (1981) asserts that the very little use of instructional media strongly indicate that the teaching of biology and other Sciences have not been efficient, students would have memorised facts as the

teaching would have been done by the teacher just "Pouring out the facts". Okpala (1981) equally points out the systematic absence of any consideration of teaching aids in curriculum planning. He notes that even when, the teacher knows that learning takes place in a variety of ways, he still clings to verbal sysmbolism, (the chalk-talk process) as the only medium of imparting knowledge. He concludes by saying that:

> "The schools in Nigeria are saddled with examination consciosness. Teachers and students alike are eager to finish the syllabus greared towards certain external examinations. Field-trips, the use of models and other learning resources are considered time waisting. As a result, more attention is paid to memorisation".

Nwakucku and Oluyitan (1982): propose the use of "disco-text" as a revolutionary change to learning in the classroom. They hypothesize that:

> Learning a subject with a rhythmic music whose lyric is appropriate to the content of the lesson will aid recall in both short and long term learning".

Soremekun (1979) highlights the factors affecting the development and use of educational technology in

Nigerian Universities. She lists such constraints as lack of electricity supply, lack of space, and funds for purchase of materials, inadequate storage facilities, and shortage of trained teachers to use the available media.

2.5 Slides And Filmstrips

Slides are still pictures which must be projected and film strips contain a series of still pictures intended for projection in sequence one at a time. Levie and Dickie (1963) say that; "Auditory signal are finite in duration and are relatively difficult to perserve". They go further to say that visual displays are normally long lasting, and have high referability, that is they are available for long periods, so that they could be referred to repeatedly. They assert that things that are seen are more easily remembered than things that are heard.

Also the need of individual learning opportunities is evidenced by the increase in the rate at which modern publics with modern ideas and attributes may want to look with deep interest at slides, film strips and so on. The learner must move at his or her own pace. This is one

important fact the instructional designer must not ignore.

Dunn (1969) in his study to compare the effectiveness of individual use of sound and slides programmes with conventional mass instruction for students of the Western Infirmary, Glassgow, found students opinion highly favourable. Dunn Harden, Halroyd Lever, and Lindsay (1969) reveal that slides have been found to have the following advantages:

1. Slides are useful in the teaching of skills.
2. They can be repeated in parts or in whole to consolidate learning or recapitulate learning.
3. Slides can be used for independent study, though they can serve a medium or a large group.
4. Participative activities and redundancy can easily be built into the audio part of the slides.
5. They are compact, light to carry and easy to operate. Despite all the above advantages of slides, he states that slides without an audio complement are useless. The picture must be interpreted and explained as comprehensively as possible. This is the reason why the researcher develops sounds along with the slide packages.

Hawthorne Chris (1979) in his article "why tape-slides" shows how film production would be time consuming, expensive, and may not be relevant to every group. In addition, students interest in a particular subject topic can be developed by involving them in the production of sound for a set of slides. The tapes are meant to complement slides, since tapes alone do not suffice for long time retention.

Mackworth (1964); Murdock (1968) and Gaik (1969) have studied the relative effect of auditory versus visual presentation and verbal information on short-term retention. They come out with two generalisations, that auditory presentation is superior to visual presentation for short-time learning tasks. Studies which manipulate the rate of information presentation have shown that auditory presentation is superior at fast presentation rate while recall of visual infromation improves with slower rates of presentation.

Hoopper (1966) notes that pictures are poor signs for communicating generalisations and qualifications such as "all" 'many' or 'most', for this reason Iconic (picture) signs are inadequate for communicating abstractions.

In Knowlton's (1966) discussion of logical pictures, he notes that "when learning tasks involve understanding a large number of relationships, a visual display which presents all the relationships simultaneously in a structure, for example, a map, or a picture of a physiological system may help overcome human-being's limited capacity to retain a sequence of ideas".

Generalising from the various works of researchers, Levie and Dickle (1963) come up with the following summary on text materials versus auditory symbols: "In learning from textual material, reading is superior to listening, when the learner may take advantage of the greater referability to print".

Van Mondfrans and Traves (1965) find however that "stimultaneous presentation of stimulus-response pairs was superior to sequential presentation of stimulus and response items".

Brown, Lewis and Harcleroad (1964) explained that learning is different from listening. Listening is a skill that should be developed early in life, by providing children with opportunities to listen, to react overtly to what they hear, to select important points by discriminating, identifying and making judgement.

They all agree that listening skills can be developed by letting the learners to the following:

(a) Listen to instructions and follow them.

(b) Identify non-verbal areas and interprete them.

(c) Identify various sounds and their source, detect humour or mood.

(d) Listen critically in order to differentiate what was said from what he expects to be said.

Wilbur Schramm (1955) sums up the whole of the research so far done in this area in his statement; "If one medium is used to reinforce another, for example, print with lecture, lecture with sound/slides and pamphet et al, there is possibility of achieving considerably more learning than from one medium alone". Engar Dale's (1969) gives the following principles of good demonstration.

(a) Establish rapport by greeting stimulating interest and arousing curicusity.

(b) Be sure the audience understands and knows every new item.

(c) Explain and emphasize the Key points by telling, showing and doing.

(d) Do not hurry, stop to question.

(e) Do not drag the demonstration.

(f) Allow and encourage questions.

(g) Review and summarise key points.

2.6 Learning Theories and the Design of Instruction

Miller (1957) expresses his views regarding the implication of learning theory for instruction in a journal of Audio-Visual, communication and crisis in education. He describes four principles:

1. Motivation
2. Cue
3. Response
4. Reward.

Miller's contention is that an effective sequence of instruction, in any medium, must include provision for these four conditions.

1. Motivation: The motivation effects of a lesson depend upon motivation which has already been learned. To be most effective the motivation aroused by instructional materials must build upon those that are already in the life experiences of the students.

2. Cue: Materials for instruction whether verbal or pictorial need to distinguish the relevant cues. Instructional materials are better to the extent that they facilitate and discriminate cues, for example, printed materials by varying types, by use of colour and by means of their organization.

3. Responses: Miller maintains that the students must do something. The doing may be inform of rehearsal. Responses to instructional materials are very important in learning. Instructional effectiveness will be increased to the extent that the materials involve the students in doing something with their just acquired knowledge.

4. Reward: Miller says that, immediate rewards are more effective than delayed ones. Instruction needs to reinforce the rewards learned in real life. For the student who is motivated to solve problems and to achieve some learning goals, find out that he has done well, is an important reward. These four principles by Miller are considered to have highly general applicability to the design of instruction.

Skinner (1957, 1958, 1965) also agrees with Miller in that Skinner's analysis of instruction assumes that motivation makes students respond which need reward or reinforcement. Skinner's view is around the principles of stimulus control or the way in which reinforcement may be used to establish both more precise and more elaborate learning by manipulation of the stimuli impinging on the learner. Therefore Skinner's views are most highly related to Miller's principles about the importance of the cue in learning.

Gagne (1965), Siegel (1967) distinguish themselves with seven major kinds of mental processing which are called learning, each of which has a different set of conditions for its optimal occurence. They are called signal learning (classical conditioning) S-R learning, motor and verbal chain learning, multiple discrimination concept learning, principle learning and problem learning.

Ausubel (1963) and Siegel (1967) insist that "school learning is meaningful learning and that this process is distinctly different from what is usually called role learning". He makes it clear that if a learner is expected to learn about coal, oil, and gas, one must tell him ahead of time that he is going to learn about the different forms of fuel.

2.7 The Art of Pot Making

It is probably correct to say that pot making in Ilorin has been the greatest contribution, Ilorin people have made to the Nigerian Culture. The influence of this art has been so strong that it caused something like a cultural revolution in Nigeria.

Pot making was considered purely utilitarian. The traditional pots of Ilorin processes artistic qualities which enhance their attraction and market value, they compete favourably with cheap manufactured foreign substitutes. Thus, they are nowadays proudly used by Nigerians of all walks of life and at the same time play a significant role in the country's external trade.

Pottery is another occupation for women. Beautiful specimens are obtainable from Ilorin Local Government Area of Kwara State. The pot makers produce a wide variety of earthen wares including cooking pots, bowls, water pots dye pots for fabric, denorating pots and ceremonial pots.

2.7.1 Educational Value of Pottery

To show both students and teachers, people at work in various jobs, and for career awareness. Promoting the students understanding of their community occupation.

The Educational value of traditional pottery is that, it can help to train the visual memory. In most people, visual memory is strongest and it is common in students that they more easily remember things they do and see than those they hear or read about. Indeed Rousseau's statement becomes pertinent here that; "If instead of keeping a child at his books, I keep him bust at the crafts workshop, his hands work to the advantage of his interest; he becomes a philosopher while he thinks he is becoming simply an artisan" (Clenister, 1959:21).

If teachers teach traditional crafts in the schools, the intellect of students will strengthen without their knowing it.

The economic dependence of a nation is very often measured by the nation's technological independence and advancement. We are always inclined to think of technological advancement in terms of mechanical products alone. Pottery involves various techniques, if Kwara State

Government ecourages the teaching of methods of making local pots or crafts in the post-primary schools, it may lead to more mass production of arts and crafts for local uses. These can be exported thus helping resuscitate the economy.

A student, in the post-primary school who has been formally taught in various crafts through the teaching of pottery can be helped to take up ceramics as a profession when he leaves school. In this way, he becomes self-employed and thus self-reliant. There is a need for art teachers to teach crafts in post-primary schools as a vocation as well as enlightenment to the students.

2.8 Problems Militating Against Pottery Instruction

The teaching of traditional pottery in Nigerian post-primary schools is faced with multi-dimensional problems. These problems prevent the subject from playing its effective and recognisable role in Creative Arts Education. The writer does not intend to handle all of these problems in a study of this nature, since time and scope of the study make such details

almost impossible. However the most pressing of these problems will be highlighted.

It appears as if the shortage of Creative Arts Teachers is the most acute problem facing the teaching of crafts in the state. Wangboje (1969:1) supports this by observing that; "Of the major problems of Nigeria Art Education, the shortage of qualified art teachers is perhaps the most acute".

There is the problem of trained Art Teachers with sound knowledge in the production of audio-visual-aids, and who are ignorant of hard and soft ware equipment. Producing traditional pottery was crude as Herskovits noted below, referring to African Art. "Their Art traditional Arts and Crafts) was crude, their talents native, their music cacophons and their dance lascivious".

Teachers are not exposed to the use of modern facilities for teaching and worse still, some teachers abandon art teaching altogether and resort to teaching other subjects.

Material Problem

Materials are very essential in any art programme. Since they are the only means by which the pupils can be

helped to sharpen their ideas and give them form; that is to say, make their idea visual.

Finance

Lack of funds to purchase the materials. The Ministry of Education is responsible for financing the schools, but the annual vote which the Ministry makes avaliable to the principal is very limited.

This in turn makes it very difficult for the principals to equip their schools with modern equipment.

2.9 Conclusion

This review of literature has summarised briefly some expressed educators' views about how audio-visual materials can be produced and the use of media in education. These educators conclude that audio-visual-aids or media are motivational and that they are able to present abstract concepts in concrete and realistic forms. The literature review has shown that media-slides present students with a wealth of experiences, stimuli, and appropriate reality which is the most effective way to

facilitate learning, and for effective teaching and learning. There is the need for teachers to know that instructional materials are not substitutes for the teacher instead, they depend on his skillful employment. There is the need also for the teachers concerned with the structure of instructional materials to attempt to discover those characteristics that will facilitate particular kinds of learning.

In the production of instructional materials for teaching of Creative Arts, the literature review shows that while much has been done in the area of production of instructional materials for teaching generally, not much has been done in the area of production of instructional materials in Creative Arts that is slides, films, and so on which are capable of:-

(a) Assisting in teaching Creative Arts when and where an Art teacher is not readily available, and

(b) Which would help to present abstract concepts in life-like realistic form to students.

Having established the impact of an effective way of producing instructional materials, this study now proceeds to the procedure and methodology of producing slides/sound for teaching traditional pottery in Creative Arts.

Finally, the review serves as an inspiration to teachers in our Secondary Schools. It will enable them to think of instructional materials as something they can produce to improve the quality of teaching.

Chapter 3

METHODOLOGY OF THE STUDY

The study was to guide teachers on how to produce instructional slides for classroom use. The guide followed a step by step process of how to design and produce the package for classroom use. This study also investigated how the teachers perceived the use of audio-visual materials in the teaching learning process.

3.1 The Subjects

The subjects were made up of teachers who teach various subjects in the post-primary schools particularly those who teach the Junior Secondary School (J.S.S.) classes.

Twenty teachers were used for this exercise. They were also asked how they perceived the use of instructional sound/slides package. Teachers were selected randomly from different schools in Ilorin Local Government Area of Kwara State.

Below was the list of schools and the number of teachers selected.

1. Government Secondary School Ilorin - four teachers

2. St. Anthony Secondary School, Ilorin, four teachers.

3. Cherubim and Seraphim College Ilorin, four teachers.

4. Government Day Secondary School, Ilorin, four teachers.

5. Bishop Smith Secondary School Ilorin, four teachers.

The distribution of schools was based on the main considerations as follows:

- Schools that already offered Creative Arts prior to the Introduction of the 6-3-3-4 system of Education.
- Schools that had already got some of the equipment for the Creative Art Course.
- Schools that had already got the facilities for slide projections such as slide projectors and electricity etc.

In the selection of teachers, the researcher used two teachers from various fields like Social Studies, Geography, Biology, Sciences and Creative Arts. In all, twenty teachers were selected randomly for effective teaching on how to produce slides. The teaching of slides production is necessary for teachers in order to apply the knowledge acquired to help other teachers in their schools.

3.2 The Instruments

The instruments for the study were designed in three groups respectively:-

(a) The principal's interview

(b) The Students' observation

(c) Questioning Method.

(a) Interview Method:

The discussion was held with the Principal of the schools selected or the Principal's representatives. The discussion was centred on the role of Audio-Visual-Aids in development of teaching learning process, with emphasis on the use of slides.

(b) Observational Method:

This study also used the observational technique in collecting information on how to use slides in classroom teaching.

-To know whether teachers showed interest in using instructional packages.
-Whether students were confident in their watching of slides.
-Time spent on each instructional activity.
-Questions raised by students, did the questions reflect interest, difficulty, or clarity in the instruction.
-How instructor handled learner's questions and problem, was it ably done?
-How attentive and active the learning, and the learners were?

(c) Questioning Method:

The teachers were asked some questions on what they had seen. The questions were asked after the programme. It may be written or oral form.

This method was aimed at providing information on teachers interst in sound/slide packages.

3.3 Using The Slide Packages

The following are pointers that may make the use of these slides successful.

1. Familiarize yourself with the room in which the slides will be used, try to visit it in advance, check the electrical outlets, screen placement, seating arrangements, viewing distances and appropriate placement for the projector.

2. Arrange for necessary equipment-projector, tape, recorder, stands, screen, extenstion cord adaptor, play and extra projection lamp.

3. Provide for the proper physical comfort of the audience, ventilation, heat control, light control, and so on.

4. Rehearse your use of the slides (if possible in the setting in which they are to be used).

5. If possible look for assistance of who will help with projection and other services and instruct him accordingly.

6. Arrange materials for use in proper sequence and in proper position.

7. Use good projection techniques for your presentation.

8. After the presentation, discuss the materials and if possible provide for related activities.

9. Judge audience reactions and consider any revision for subsequent presentation.

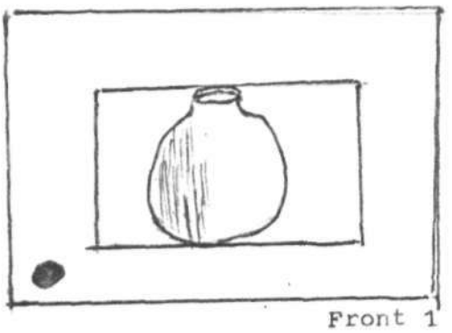
3.4 The Basic Guideline for The Utilisation of The Package

For the utilisation of this instructional package, it is very important to follow the following basic guidelines carefully. The slide projector uses a circular formation for the presentation of slides. The tray holds the slides in position for the presentation. The arrangement of slides - the tray (carousel) is the basis for good presentation.

There are eight possible ways a slide can be placed in a projector. Seven of them are wrong (e.g. up side-down, backwards, sidewyas, and so on). To avoid these mistakes, a standardized procedure is recommended for placing a reminder spot on the slides. First, your slides should be arranged and numbered in the order in

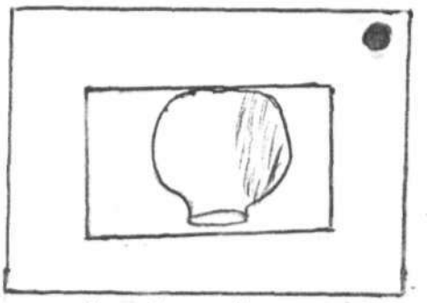
which they are to be shown. Then take each slide and bold it the way it is supposed to be seen on the screen, that is, right-side-up with any lettering running left to right - just as it would be read (if the slide lacks lettering or other orienting information hold it so that the emulsion side is toward the screen. Then simply place a spot on the bottom left-hand corner as shown in Figure 3.1 (a) below.

Fig. 3:1(a)



Front 1

Fig. 3:1(b)



How to place the slide

This spot is referred to as "thumb spot" because when the slide is turned upside down to be placed in the projector your thumb will grip the slide at the thumb spot as shown in Figure 3.1(b) above.

- Place the next slide behind the first one in the slide tray.
- Preview the slide, using the study guide provided.

- Pre-audit the tape along with the slides.
- Prepare the instructional setting by pre-arranging the classroom environment.
- Ensure optimum view and hearing by the students as follows:

1. Choose the most appropriate screen.
2. Check to see that the seats are not too near, too far, or at uncomfortable angle to the screen.
3. Provide a chart, (if possible) showing how pots are made.
4. Tell them the follow-up activity as stated in the guide book, e.g. reading, discussion or practical application of skill.
5. Allow students to lead in discussion or carry out application.

3.5. How to Use the Slide Projector

1. Slides are arranged in sequence in a carousel, The arrangement starts from number one to the end of the last slide. To properly orient slides in the tray (Carousel) hold them up-side down before dropping them into the

appropriate slots. When all slides are loaded replace the locking ring and twist one-half closkwise.

2. Plug in the power cord and switch on electricity.

3. Switch on fan and the lamp.

4. Focus on the screen - screwing the lens in or out until the frame on the screen in sharp, then switch of lamp.

5. If it is adaptor, insert slide carrier in the space provided between the lamp and the light channel with the slide carrier.

6. Take the first slide, follow the diagram.

7. Rotate until the bottom left corner becomes the top right corner. Thus the picture is upside down and right side left.

8. Then carefully drop the slide into the slot, that is outside the body of the projector.

9. Switch on lamp.

10. Push the slide carrier towards the other side until it stops.

11. Re-focus picture if not sharp enough.

12. Insert the next slide in the same way into the empty slot and push or pull the carrier until the second picture is on the screen.

13. Remove the first slide which is now free and insert the next one.

3.6 The Narration and the Script

The producer of this package used two narrators to give variety to the narration, a male and a female. A mixture of voices adds interest. Each voice can take a part or one voice can read the general material, and another can read the more detailed parts. They are people whom the researcher considered to speak clearly and who could read the script in a conversational tone while still communicating with proper feelings and expression.

Jerrold Kemp (1981:158) says "Men's voice are more easily understood on a recording than are women's". The narrators studied the script carefully, varifying proper pronounciation and special terms and indicating these in the script. The script has all the cueing places plainly marked.

3.7 Music And Sound Effect

Kemp (1968) says that Research evidence indicates that background music is not essential to effective communication with audio-visual materials".

In some instances indeed, it interferes with the message. For other purposes it may help in creating a desirable mood and in building continuity. The writer feels that music should be included as the background from the titles that will assist the projectionist to set the volume level for the narration which follows. When music is used under narration it should be maintained at a low enough level, so that it does not interfere with the commentary or compete with the picture for the viewer's attention.

Chapter 4

THE INSTRUCTIONAL SOUND/SLIDES PACKAGE

This chapter deals with the details of the scripts used for the slides production in the Instructional package. The package is designed and produced to suit the teachers in Junior Secondary Schools (J.S.S.) and the Students. Although the general principle for slides production can be useful for teachers at all levels.

After the instructional package had been designed and produced, it was evaluated by the teachers with the students in the various classes.

4.1 The Slides' Production With Sound

The Teacher

Any teacher with some experience in teaching knows the importance of teaching with audio-visual media. Not only do they make lessons more exciting, they also make learning easier for learners.

Rationale

It is therefore important that every teacher uses audio-visual media. It is more important that the teacher knows how to make his own media in order

to tailor instruction to the background and culture of learners.

This instructional package is intended to teach you the step by step process involved in the making of slides.

The content of the slides will depend on the subject and topic chosen. For this presentation, pottery is the topic. The slides show how pots are made beginning with clay being the basic material, to the firing of pots.

General Content

This instructional package consists of slides with sound. The instruction is dealt with in the following unit. What is expected?

Objectives

- After completing the package, teachers will be able to see the step by step process of producing slides.
- Teachers will be exposed to the materials for producing slides.
- Teachers will be able to identify various equipments used for producing slides and their names.

- Finally, teachers will be able to produce their own slides.

At the end, teachers are allowed to make their comments. Likely questions are those which boarder on scrarcity of materials. This is where it is necessary to emphasize improvisation.

4.2 Producing Slides With Sound, A Guide for Teachers

This unit contains the procedure for the production of slides. Let us now watch how slides are produced.

Target Audience

Teachers in Secondary Schools, particularly Junior Secondary Schools (J.S.S.).

	VISUAL	NARRATION
	Topic:	Background Music
1.	INTRODUCTION	Producing slides with sound (Pause)
2.	Producing Slides with Sound	This slide package is designed for practicing teachers who desire to improve on the quality of their instruction. The step-by-step procedure used will help even the layman in photography

	VISUAL	NARRATION
		to take shots that will be of instructional value. (Pause) We will begin by defining some key words.
3.	A Slide	The term slide refers to a small format photographic transparency individually mounted for one-at-a time projection. The size of slide most frequently encountered in Educational use is 2" by 2".
4.	Films	Here are a range of films. Films capture the image of the object. There are manykinds of films in the market. Number one is Agfa Chrome Number two is Ekta Chrome Number three is Kodar Chrome There are the most popular brand names in Nigeria. These films produce good results when used for slides.
5.	Defferent Tupes of Cameras	Not all cameras are suitable for taking shots for use as slides. The following are some popular cameras for shooting your slides. (a) 35mm single lens reflex Camera. (b) Twin reflex camera (c) 35mm copying camera (Pause)

	VISUAL	NARRATION
		The copying camera is used for copying pictures or diagrams from books; if the real objects cannot be found. The lenses of copying cameras can be fitted over the lens of conventional cameras.
6.	Flash Guns	The flash has become an almost indispensable aid that widens the scope of the camera and makes photography possible in any condition. Where there is darkness or not enough light, the flash is necessary for bright pictures. There are many types of flash guns but the one commonly use is Electronic flash.
7.	Pot	Our focus is on the making of pots. The essential thing to note here is how the shots should be taken so that the main concept being presented in the lesson stands out clearly for example.
8.	Pots for Cooking	What are pots used for? (Pause) For cooking; (Note that this picture includes both the pot, the tripod, and the immediate cooking area. Therefore, a medium shot is advisable.
9.	Flower Pot	Pots are also used for decoration (again use medium shot because of the distance).
10.	Pot for storing water	There are also pots for storing water. (medium shots as above)

	VISUAL	NARRATION
11.	Clay Sources	Clay, the main ingredient for making pots is derived from several sources. (i.e.) (a) From swampy areas (Pause) (b) From the well (medium shot is advisable)
12.	Clay preparation	After collecting the clay the potter then removes all the foreign bodies like stones, sticks, and leaves. Then dried the clay in the sun.
13.	Clay being pounded	It is then pounded to smooth powder.
14.	Mixing of clay	The clay is then mixed with water (use close up shots for the shooting.
15.	Types of clay	There are two major types of clay. These are primary and secondary clay.
16.	Primary clay	Primary clay is found at its original placy of deposit. It can also be pererred to as either Kaolin, residual or China clay. It is usually whitish in colour.
17.	Secondary Clay	Secondary Clay is found at the river banks. It has a high level of plasticity due to the effect of decomposed organic matter on them. It is brownish in colour (Medium shots for No. 15 and 16 above).

	VISUAL	NARRATION
18.	Tools for Clay work	The following objects are the working tools that are required of potters. Look at some of them while I mention them. (a) Wet Frabric - for decorating the rim or ear of the pot. (b) Broken pots- Serve as moulds. (c) Broken calabash - for smoothering the body. (d) Wire and knife - for triming the edges and general decoration of the body of the pot. (Close up shots is adviseable).
19.	Methods of pot making	There are four methods of moulding; namely; mould, pinching, coil, and slab.
20.	Mould method	The potter has a large lump of clay which she has placed around an old pot. By beating the clay with her hands it will eventually take the shape of the old pot.
21.	The Pinching method	The second potter uses the pinching method. She makes the clay in a round shape like a ball, she uses her thumb on the inside and the two fingers of the hand on the outside of the pots. This should be done gradually to get the required shape of the pot.
22.	The coil method	This potter takes a piece of clay and rolls it out into a long thin coil. Next, she coils a base, she makes more coils and joins them to the outside edge of the

	VISUAL	NARRATION
		base. Then she uses the spatula to blend the joints of the coils together. (Pause). She continues until the height she needs is achieved.
23.	The slab Methods	This potter rolls out a flat slab of clay. She cuts it into pieces of appropriate sizes depending on what she wants to make. She makes some slips, to act as cement, presses the edges together and joins the ends to form a box, you can use any of these four methods to make your own pots. (Pause) (For these methods use close up shots to show the hands and clay).
24.	Arrangement of items for pot decoration leaves, pebble, seeds, etc.	This picture shows the items used for pot decoration. Let us make a list of what you see in the picture. (a) Pebbles (b) Baobas seeds. (c) Leaves. When the pots were in leather hard stage, you add your colour. Note, (all the shots above are taken at close range. This is known as close up).
25.	Pots drying in the shade	Pots must be completely dried before they can be fired. Slow drying is the best method to avoid cracking and explosion when firing. These pots are placed under room temperature to dry. Too rapid drying causes strains in the clay pots which result in cracks when drying.

	VISUAL	NARRATION
26.	Finished pots	Here are finished pots. All the processes have been completed. (Pause) The potter packs the pots into a Lorry supported by a layer of grass and sticks and carries them to the market.
27.	Reel of processed developed film	When all the shots have been taken the film is removed from the camera in a darkroom and taken for processing or developing.
28.	Cutting the negative into individual shots.	When the negatives have been developed, they must be cut into frames. These then be mounted. The negatives should be cut into strips and kept in sleeves either individually or in groups of strips which make up a complete film.
29.	Frame	These are card frames or card mounts. Card mounts are cheap to buy. They hold the film very flat for projection. They offer protection from finger marks and abrasions. There are paper frames as well as plastic frames.
30.	Frame Machine	Here, is the framing machine. Its job is to hold the negative together with the frame. The process is simple. Place the frame in the press and apply the pressure. After 5 to 10 seconds release presure and remove the mounted print check mounting effectiveness by gently bowing the board.

	VISUAL	NARRATION
31.	Arrangement on Carousel Tips on projection	As with negatives, the twin functions of transparency filing are safe storage and efficient retrieval. For good projection, slides were arranged well in the carousel and when triggered the slide comes down from projection one at a time. A carousel can take up to thirty or more slides or a circular holder of about eighty slides.
32.	Combined slide projector	Here is a track recorder with sound recorded on one track and the pulses which trigger the projectors on the other. All standard projectors accept 35mm or slightly larger transparencies which fit the usual 2 inch mount.
33.	Screen	The screen is used for projecting slides. Projection console can be used for projection as well as smooth wall. Any smooth surface can serve, if there is no screen provided it is painted white.
34.	Cassette Recorder	The cassette recorder is for Audio sound. Cassettee tapes can be used to record sound to accompany the slides.
35.	Conclusion	I am sure you have all seen how slides are produced. If there is any problem, please consult a resource person for advice.

Chapter 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The instrument was administered to the schools through personal visits. Observation of the students and teachers was carried out. Interaction with the Principals from each school via oral interview was carried out. From the results of teachers' reaction, the producer of this package was setisfied that the package has the ability to meet the needs of the students and teachers, and could fulfil the objectives for which it was designed.

The analysis of responses obtained from collected interviews revealed that Media mostly available for teaching of Creative Arts in the schools were recommended text-books and the chalkboards. The other media of significant availability were the small handouts prepared by various Art Teachers sold at One Naira or two Naira to the students. These handouts served as supplementary Art Text Books.

From this evidence, the prints form the bulk of the available Media for Creative Arts Teaching in the schools. Media like Radio, Television programmes, Records players, Tape recorders, over-head projectors, slide projectors, cutouts, slides, schools visited.

The problems associated with this area include:

1. Lack of funds
2. Non-availability of such materials for purchase locally.
3. Lack of expertise on the part of Teachers to handle or use these materials.
4. Lack of devotion to the production and use of these items.
5. Environmental problems including non-availability of electric power in some of the schools.

Findings revealed that nearly all the Teachers had no training or experience in the use of non-print materials, especially the electronic media. There were also no trained technicians or laboratory attendants who could handle the available materials.

The following conclusions are justified:-

1. The available media in our schools are mainly the printed materials and maximum use are made or them.

2. The Creative Arts Teachers in Ilorin mostly restrict themselves to the use of Art books which are recommended text books in addition to the chalkboards.

3. The inability of teachers to produce slides for teaching centred around finance to purchase the materials and difficulties encountered in obtaining these materials locally.

4. Despite the fact that there is a resource centre in Ilorin, the Teachers do not seize the opportunity to use this resource centre to obtain available materials they need, Neither do they visit this centre to familiarise themselves with what the centre has.

5. No workshops, Seminar and in-service is organised.

5.2 Recommendations

1. It is recommended that more educational resource Centres should be established in all Local Government Areas of Kwara State, where necessary and needed equipment and professional expertise could be made available to teachers.

2. The resource Centres established, whould be sufficiently equipped to handle all teaching materials so as to make it useful for teachers in all subjects taught in the schools.

3. Organised workshops, Seminars, Symposia and Conferences for Teachers where they can up-date their experiences should be held regularly.

4. The teachers in the schools should also be trained to be aware of the essential assistance these media could offer to their teaching.

5. It is recommended that production of Art Instructional packages both locally and imported should be considered as a safety device out of the present predicament.

6. The Federal and State Governments should reinforce their priority to produce the

Instructional Package for use in both primary and post-primary schools.

5.3 Suggestions for Further Studies

As this study does not cover all the aspects of Instructional Media for the teaching of Creative Arts in Secondary Schools, it is strongly suggested that further work should be carried out in the following areas by Educational Technology Students.

- The study could be extended to the teaching of Local Crafts in Primary Schools where students could be motivated to become familiar with Instructional Packages.
- The study could be extended to the production of a particular media on a learning domain desired for a particular subject of interest.
- The study could be carried out in tertiary Institutions of other subjects.

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APPENDIX 1

QUESTIONS TO THE PRINCIPALS OR THEIR REPRESENTATIVE

1. Have you ever come across slides?
2. Do you feel slides be encouraged for teaching?
3. Are the teachers complying with the use of teaching Aids?
4. In keeping with the National Policy of Education on production of Visual Aids, do you have Visual Aids materials in your school?
5. Is the making of teaching aids compulsory in your schools?
6. Do you provide materials for teachers to make teaching aids?
7. Do you have overhead projector in your school?
8. Does your school employ Instructional Technologist who can produce and teach with slides?
9. Do you encourage your teachers to learn how to produce teaching aids for the students?
10. Does the State Government provide any teaching aids materials for school?
11. Would you support the idea of establishing resource centres in every Local Government Area of the State?

APPENDIX 2

QUESTIONS TO THE ART TEACHERS

1. Do you use teaching aids for your lesson?
2. Does the school provide you with teaching aids materials?
3. Have you any knowledge of slide production?
4. Do you know how to operate an overhead projector?
5. Does the school have any projecting equipments?
6. Does the State Government provide materials for teaching aids to your school?
7. Do you think the use of slides is important in your lesson?
8. Have you ever attended a Workshop or Seminar on teaching aids?

APPENDIX 3

QUESTIONS TO THE STUDENTS

Ask Questions Like:-

1. Was the Instruction too long or too short or appropriate?
2. Was the Instruction too difficult or too easy or was it adequate?
3. Did you have problems with any sections or parts of the Instructions?
4. Were the illustrations appropriate or distracting?
5. Was the use of colour appealing or distracting?
6. What did you like most?
7. What did you like least?
8. How would you change the Instruction if you could?
9. Did the tests measure the materials that were presented?
10. Would you prefer another medium?