UTILIZATION OF INSTRUCTIONAL MEDIA IN SOME SELECTED GRADE II TEACHER TRAINING COLLEGES IN KADUNA STATE, NIGERIA

BY

ABDULLAHI TUKUR KADAGE

NOVEMBER, 1987



DECLARATION

I hereby declare that this project is a record of my own research. It has not been submitted in any form for any other higher degree.

Abdullahi Tukur kadage

Date:

CERTIFICATION

This project report titled "Utilization of Instructional Media in Some Selected Grade II Teacher Training Colleges in Kaduna State, Nigeria", by Abdullahi Tukur Kadage meets the regulations governing the award of the Degree of Master of Education of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

/s-1, The Author ..... 14-9-88 .....

Dr. B. O. Uchegbu — Date

Chairman Supervisory Committee.

..... Date 29th Sept 1988

Mr. S. Owuna

Member, Supervisory Committee.

..... Date 30/9/88

Dr. A. A. Sambo

Head of Department.

..... Date 29-11-88

Prof. I. Saror

Dean Postgraduate School.

ACKNOWLEDGEMENT

The candidate is grateful to the members of the Supervisory Committee for their helpful guidance and advice. Especially, he is grateful to Dr. Ben Ocheglu and Sunday Owuna who offered special assistance; and to the Vice-Chancellor and the Council of the University of Sokoto, Nigeria for providing the graduate felowship. He is also grateful to the Tukur Family of Salmanduna, Zaria, for their cherished moral and spiritual support.

The researcher gratefully acknowledge all that he has gained from long friendship with Safiya Abdullahi Tukur, and would wish to express his gratitude to all his friends especially Aliyu Jumare, Badamasi Ibrahim, Yusuf T. Ashafa and numerous others. A special gratitude also goes to Yusufu Tanko for his editorial assistance.

ABSTRACT

This study investigated the utilization of instructional media in some selected Grade II Teacher Training Colleges in Kaduna State. By instructional media the researcher refers to all forms of information device that can be used to promote and encourage effective teaching-learning activities.

In order to find out what exists in each college and what is effectively used in the colleges, the researcher designed and used two different structured questionnaires. One was meant for the college principals and their media personnel. In all 104 questionnaires were administered and 78.84% responded. The responses were used in analysing the data and drawing conclusions in this study.

Among the findings of this investigation are that:

(1) Most of the colleges investigated have no instructional media.

(11) In the few colleges that have them, the instructional media are not effectively used.

(iii) Teachers do not know how to use some instructional media.

(iv) They (teachers) have no training in instructional media.

(v) Teachers cannot improvise their own instructional materials.

(vi) There are no media personnel in the colleges.

(vii) Instructional media equipment and materials are not maintained.

(viii) Where the equipment and materials are available, there are no physical facilities to use them effectively.

(ix) Instructional media are in limited number because there is not enough fund to purchase the equipment and materials.

In view of these problems such as difficulty in acquisition, non-availability, ineffective utilization and lack of maintainance, all we need to do is to maximize our efforts in improvising instructional media relevant to our needs and aspirations.

TABLE OF CONTENTS

Title Page

Declaration i

Certification ii

Acknowledgment iii

Abstract iv

Table of Contents vi

List of Tables ix

Definition of Terms x

CHAPTER I

1.1. Introduction.....1

1.3. Statement of the Problem 6

1.3 Purpose of Study 7

1.4 Significance of the Study 8

1.5 Delimitation and Scope of Study 10

1.6 Assumptions 10

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 Introduction 12

2.2.1 A Brief History of Western

Education in Nigeria.....17

2.2.2 Instructional Technololgy in Nigeria ...17

2.2.3 Introduction and Development

of Instructional Technique in Teaching..21

2.2.4 Availability of Instructional media in Teacher Training Colleges 24

2.2.5 Free and Inexpensive Instructional media 29

2.2.6 Utilization of Instructional Media in teacher Training Colleges 30

2.2.7 Information and Information Sharing ...48

CHAPTER III

DESIGN AND THE STUDY METHOD AND PROCEDURE

3.1 Introduction 51

3.2 Samples and Sampling Procedure 51

3.3 Instrument Used 53

3.4 Rationale for the Methodology 54

3.5 Administration of Questionnaires 55

3.6 Data Analysis 55

CHAPTER IV

FINDINGS AND DISCUSSION OF FINDINGS

4.1 Introduction 56

4.2 Assumptions 56

4.3 Procedure of Discussing the Result 57

4.3.1 Results From Teachers Responses 59

4.3.1.1 Availability 59

4.3.1.2 Utilization 64

4.4 Results From Principals Responses or

Instructional Media Personnel Responses 69

4.5 Summary of Findings 77

CHAPTER V

5.1 Conclusion 81

5.2 Recommendations.....83

BIBLIOGRAPHY 88

APPENDIX A Map of Kaduna State showing the study Areas..... 93

APPENDIX B Questionaire for principals or Intructional media staff of Grade II Teachers College.....94

APPENDIX C Questionaire for school Teachers (Grade II Teachers Colleges).....101

APPENDIX D Letter to Prospective respondents...109

APPENDIX E Letter to the Director Katsina Zonal Education Office.....110

APPENDIX F Letter to the Director, Daura Zonal Eductiona Office.....111

APPENDIX G Letter from the Zonkwa Zonal Director to the Principals of the Colleges concerned in the Zonkwa Zone.....112

LIST OF TABLES

TABLE DESCRRIPTION PAGE

4.1 Equipment and Materials available at the eight Selected Teachers Training Colleges in Kaduna State 60

4.2 Improvisation of Instructional Media ..63

4.3 Frequency of use of Instructional Media .....

4.4 Instructional media Considered particularly more useful in teaching-learning process.....

4.5 Readability for use of the available Media .....

4.6 Reasons why instrcutional media are found useful in teaching-learning process.....

4.7 Financing Instructinal media .....

4.8 Places where Instructional media are stored .....

4.9 Maintenance of Instructional media .....

4.10 Instructional Media Personnel .....

4.11 Teachers' Qualifications .....

4.12 Teachers' Years of Experience .....

4.13 Teachers' Professional training and workshops attended..... 76

DEFINITION OF TERMS

Terminologies used in this study have been defind strictly within the context.

Audio-visual Instructions: Instruction in which the use of audio and/or visual aids is an integral or supplementary part.

Audio-visual Materials: Instructional materials that present visual and/or auditory symbols. Some materials contain special instructional techniques (such as programmed instruction) as well as messages. They include film strips, audio-tapes, video-tapes, flannel boards etc. The list of materials is by no means exhaustive.

Educational Technology: The behavioural engineering involved in designing and regulating instruction. Now extended to denote the design and implementation of systems of teaching or instruction, or to the field of study and practice concerned with such systems.

Educational Resource Centre: Place at which teaching materials, curriculum developments and

educational technology materials (hardware and software) are prepared and provided for the use and information of teachers in preparing their courses or lessons.

Instruction: Specific teaching similar to skill training. May be thought audio-visuals correspondence, individuals, etc.

Instructional Media: General term for audio-visual aids or printed texts and materials which assist teaching and learning.

Learning: The shaping or changing of behaviour; the change in behaviour may be due to acquiring knowledge, mental or physical skill. Also a change in behaviour may be the result of the forming or shaping of attitude. They all indicate learning.

Learning Resources: All of the resources (data, people and things) which may be used by the learner in isolation or in combination, to facilitate learning.

Locally Made-Materials: Instructional materials made within the School by teachers and/or

Students to aid teaching and learning. They include all the improvised instructional aids.

Teacher-Training College: An institution of learning where a number of Student Teachers are provided with Professional education.

Technology: The processes, systems, Management and control mechanisms, both human and non-human, of looking at problems and finding solutions to them.

Utilization: Is interacting with the learner; Or facilitating the interaction of other resources with the learner.

CHAPTER I

1.0 INTRODUCTION

Society is changing fast in the present age and this change is global. Education in particular is now faced with the challenge of fulfilling the need of a changing society. Hence, Educational institutions, increase in student enrolment and so forth, have therefore arisen. In order to solve these educational problems, innovative approaches are being developed. One of such innovative approaches is the integration of instructional media into the educational system particularly in the Teacher Training Colleges.

There is an urgent need for effective and frequent use of instructional media in teacher education. This is a technological age. Therefore, a variety of instructional media to support and improve educational activities in teacher training would be an asset. Apart from listening on the radio and watching television, students can watch

KASHIM IBRAH

films, filmstrips, slides and many other projected materials. They can also listen to tapes and discs. The need for these alternative sources of instruction in teachers' colleges will continue to increase. More teachers and students will turn to them to satisfy their informational and eductional needs. Most of the public attention that has been focussed on education of late has been on the teacher, who is an indispensable instructional medium. Hence, the Federal Ministry of Education designed tests to screen teachers and evaluate the training of teachers. Models have been developed to aid effective teaching and learning. Therefore, career ladders have been designed or created to reward the "good" teacher.

Eduction has been presented as "learning" and improving learning, therefore, is improving teaching (Balogun,1982). In education process, effective instruction is crucial, thus it will be more accurate to emphasize "instruction" in this study. Instruction is the process of creating favourable conditions which will enable learning to take place and there are several methods of creating those conditions.

There is the curriculum, which represents what will be taught; there are alternative delivery

systems such as books, worksheets, audiovisual materials and teaching aids, and there is an instructional system that ties them together. Even within teaching, there are many ways in which a teacher can teach. A teacher can lecture to a class to transmit information by means of various teacher's and student's aids. One method of teaching is by dividing the class into small groups and have them work in groups. How the teacher teaches and what he uses to teach almost invariably depend on who and what are being taught. What the learner has already learnt and what he or she must learn, and how he or she learns using different learning aids in order to master the tasks at hand, are the real considerations of the teacher. Furthermore, in order to achieve his aim the teacher employs the help of some recently developed aids to teaching-learning process which were termed "audio-visual aids or materials".

The term audio-visual aid (AV aids) is used here to refer to instructional materials in the classroom. In the early part of the 20th century, Audio-visual education was called just 'Visual Education'. This of course was logical because most of the media available to the shools were

visual. But with the advent of the radio, photographs, tape recorders, television and communication satellites, the additional dimension of 'audio' has been linked to 'visual', thus audio-visual was accepted as an accurate name for the instructional material . Terms such as media and materials refer to a particuar form of communiction - that is radio and television. So, when we talk of audio-visual the reference is to a general category which include the following: chalkboards, bulletin boards, projectors, film strips, slides, illustrations, charts, graphs, globes, audio-tapes, textbooks and radio broadcasts. A piece of media refers to a single item of communication such as the tape recorder or a picture. Thus, we can say that 'the systematic application of modern or local hardware and software equipment and materials, into the process of teaching and learning is called 'instructional technology'. Instructional technlogy, therefore, involves partly, the application of audio-visual equipment and materials.

The need for instructional media, their availability and utilization in any classroom of our educatinal system is becoming increasingly necessary. The traditional method of 'chalk and

talk' in the classroom is becoming old fashioned with the rapid technological development in communication technology as pointed above. Secondly, due to the incredible growth of students' enrolment, teachers virtuallly find it impossible to give individual attention to each student; hence learners are today encouraged to assume an increasing responsiblity for their own learning.

With the use of various instructional media, the teacher is able to give each learner guided opportunity to learn without neglecting his or her own interest at his or her own pace (Balogun et al, 1982).

A developing nation such as Nigeria should not look up to the more technologically developed nations like United States of America and Great Britain for all its technological support. This country, thefore, should encourage the production, use and storage of instructional media loca lly, all aimed at improving the quality of instruction. However, if various instructional media are made available for use in the classroom, the learners will be provided with ample learning experience which otherwise could not have been possible by the traditonal method of teaching.

Finally, school systems must be found that are willing to take the plunge, and the designers of instruction must be found who can produce software locally that is truly "teacher friendly". We will probably also need agencies and governments that are willing to bankroll such undertaking rather than concentrating exclusively on where to find new teachers. It is with this background that the researcher finds it necessary to conduct a study within the development domain, which he considers very important an area of all the four educational technology domains.

1.2 Statement of the Problem

The major concern of this study is to probe resource, availability, utilization of instructional media and their development; and the problem under study is centered around instructional media utilization in promoting teaching and learning in selected Teacher Training Colleges in Kaduna State.

The questions that this study seeks primarily to answer are:

(i) Do instructional media exist in Teacher Training Colleges in Kaduna State?

(ii) Do teachers make effective use of the instructional media?

(iii) Do teachers improvise local instructional media?

(iv) How do the colleges procure and/or keep instructional media equipment and materials?

(v) Are the media equipment adequately maintained?

1.3 Purpose of Study:

The purpose of this study is to find out the status of instructional media in seleted Teacher Training Colleges in Kaduna State. The researcher deliberately chooses the Teacher Training Colleges because of their importance in the educational system of this country. The purposes among other things are:

1. Find out what instructional media are available in the colleges.

2. Find whether or not they are effectively utilized.

3. Find out whether or not there are adequate physical facilities for their use.

4. Determine operations affecting the instructional media, for their acquisition, storage and retrieval.

5. Find out if there are trained instructional media personnel in the colleges.

6. Find out what profesional training the teachers have in the use and production of instructional media, and

7. Make recommendations for improvement.

1.4 Significance of the Study:

The significance of this study could be seen from so many dimensions, and at different levels of education. For instance,

1. With the introduction of the Universal Primary Education (UPE) in 1976, the educational sector witnessed an astronomical increase in students population, right from the elementary to the post-primary institutions while both teachers and other non-human resources (instructional materials) remain the same. Thus there is no adequate provision to support this increase. The study would notify the Kaduna State Government of the situation of instructional media, in its Teacher Training Colleges.

2. To do so it is important that a study be conducted on the availblity and utilization of instructional media so that the authorities and

the teachers are made aware of the situation of the instructional media in the colleges.

3. With the help of this study, the Kaduna State Government would know what physical facilities are necessary in the Grade II Teachers Colleges for the effective utilization of instructional media.

4. The study wil provide useful inventory information for the Principals of the collegee in that -

i) it will help them to know whether or not they have trained media personnel so as to take necessary action to train personnel in the use of instructional media.

ii) Where the instructional media are available, this study will help them to know whether they are maintained or not.

iii) the work will still help the principals to know whether the media equipment and materials are easy or difficult to retrieve for use by the teachers.

5. the study will provide useful information for the Kaduna State Ministry of Informtion on the status of Instructional Media in the State's Grade II Teachers' Colleges.

6. The study will provide useful informaton and references to scholars and researchers interested in the area of instrucitonal media at the Grade II Teachers Colleges.

1.5. Delimitaton and Scope of Study

The research area is geographica'lly delimited to Kaduna State and to some selected Teacher Training Colleges in the State. The size and population of the area, as well as the financial constraints, certainly make the researcher to delimit the study to the area and population mentioned above. Consequently, a sample size of eight Teacher Training Colleges were selected randomly across the state, from which responses were obtained and treated. The procedure of sample selection ensure the adequate representation of interests of both the teachers and the principals.

The scope of the study is wide enough to cover all forms of instrumental media that is available and utilized to aid instruction in the Teacher Training Colleges in Kaduna State.

1.6 Assumptions

This study was based on certain basic assumptions which guide the formation of the

research questions. The following are the basic assumptions:

(i) That instructional media exist in the Teacher Training Colleges in Kaduna State.

(ii) That instructional media is not effectively utilzed by teachers in training students in their respective colleges.

(iii) That there are no trained media personnel in the Teacher Training Colleges in the State.

(iv) That the exposure of the teachers and students to the use of instructional media through workshops and conferences will affect effective teaching - learning process.

KASHIM IBRAHIM LIBRARY

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION:

The literature examined issues related to instructional media utilization in some selected Grade II Teacher Trainnig Colleges in Kaduna State. Specifically, it reviewed related and relevant literature on the study. The issues of availability and utilization were also reviewed from various theoretical perspectives.

From the begining of the development of audio-visual materials, emphasis has been placed mainly on design of aids, audio-visual equipment such as the film-projector, the television, tape recorder and overhead projector for classroom instruction. However, these aids only serve to assist teachers

who are traditionally considered as the major source of knowledge after books.

"Instructional tecchnology" as defined in the 1970 report of the Commission on Instructional Technology, reads:

> A systematic way of designing, carrying out and evaluating the total process of learning and teaching in terms of specific objective based upon research in human learning and communication, and non-human resources to bring about more effective learning."

This definition is widely accepted among scholars and writers on audio-visual materials. Among whom are, Woods and Wylie (1976) and Brown and Harcelroad (1977).

For better understanding of this concept of educational technology let us look at it in its conceptual form and analyse it. Ezaenya (1984) observed:

> Instructional technoloy has been viewed by many practitioners and non-practitioners alike in many often contadictory ways. At one end of these views is the notion that educational technology refers to 'the production of teaching and learning materials, at the other end is the holistic view which holds that 'educational technology must be conserned with everything education, from instructional equipment and materials to management of people in the educational system.

It will not be very surprizing if an attempt at conceptual analysis by anybody, whether in the field or not, results in greater confusion. The approach in this part of the introduction is to

summarize what one has perceived as some of the most important and comprehensive considerations of the term 'instructional media.' Mitchell (1977:134) explicates five conceptions of educational technology, each of which can stand on its own while they can all fuse together to represent the primary and central meaning of appropriate professional role.

Educational Technology I: Educational Psychotechnology

> This first conception relies heavily on the thought process of pyschotechnologists to improve students' capacity. This is done by varying sensory input directly (with a tangible object like sweet) or symbolica lly (verbal, audio-visual or other communications). Central to the issues of educational psychologists are such issues of diagnostic assessment of students' capacity; clarification of educational objectives; selection or prescriptio n of instructional communications, materials or activities, and evaluation.

It is quite clear that all these issues are considered and treated in instructional media design. However, this conception corresponds to the profesional practice of the learning process.

Educational Technology II. Educational informaiton and communication Technology.

> This meaning emphasizes the design, production and evaluation of instructional materials and communications locally or at a distance. Attention should be drawn here to both the generating,

> selecting , processing and storage of information for education, and to information retrieval and communication so that knowledge is made available.

This corresponds with the role of the instructional material producer, who in turn is the key element in providing the instructional media.

Educationl Technology III. Education management Technology:

> The core meaning repesented by this conception is organizational technology which provides useful decision models; information systems; and organizational theory for man-machine systems. Experience has shown that management of resources is not a simple administrative matter.

This approach is inextricably bound to the problem-solving process whereby resources, including the organization itself, are allocated to produce better educational results. At this juncture, we can say the corresponding professional role is that of a manager of learning resources.

Educational Technology IV: Educational Systems Technology:

> This view of educational technology is more comprehensive than any other discussed so far. This is mainly concerned with administrative systems and operating systems - (such as radio or television outfit for education, or departmental/institutional education systems). A practitioner here may design organizational alternatives to achieve a set of educational

goals, or conceive and implement a multimedia educational system or even serve with an instrumental media development team to renovate or design suitable instructional aids (Ezeanya,1984).

Educational Technology V: Educational Planning Technology:

This conception of educatinal technology can be interpreted as eduational ystems technology at the national levels.

It is common knowledge that at present the field of instructional technology is occupied mainly by generalist educators whose consideration of educational issues is dwarfed by political and economic factors. Considering the importance of these issues, a reasonable limit in education decision-making for such educators should be set by all successive governments at Federal and State levels. Often, professional advice of educationists in the Ministry is overlooked because a minister for education. is not an educationist.

The practices explained above correspond to the role of the present day educational planner. The unifying factor here is the system's approach to problem-solving and since problem-solving is the core of all educational spheres and instructional media can aid problem-solving,it follows that the enlisting of various instructional media into instructional techniques should be emphasized.

2.2.1. A Brief History of Western Education in Nigeria

Western or formal education was introduced into the country by the Missionaries in 1904 (Fafunwa,1974 and Ozigi, 1981). Their primary objective was to educate the natives to become catechists, Sunday School teachers and pastors (Lewis, 1965).

Lewis (1950), stated that the British Colonial rulers had no clearly defined policy on how to run schools until 1900; although it was clearly known to them that all they were prepared to teach was that kind of education which will enable the natives help them (the British) in the administration of the colony. Between 1900 and 1960 (when Nigeria attained independence) the colonial administrators tried to improve the educational system in the country. As a result of this, a few more schools were built and some few secular subjects were added to the curriculum.

2.2.2. Instructional Technology in Nigeria:

The instructional media which constitute instructional technology were introduced to the instructional system in Nigeria in 1960s by the Federal Schools' Broadcast. This was later renamed

Federal Schools' Broadcast and Audio-Visual Development Centre. As time went on, it changed its nomenclature to "National Educational Technology Centre" (N.E.T.C.) Kaduna. The Federal Government was committed to introducing instructional materials at all levels of education in the country, hence the centre was given all the encouragement to design and produce learning packages and educational programmes for primary and post-primary institutions to be aired over the radio and also to be televised.

Similarly, Educational Resource Centres (E.R.C) were established in the state. The centre supply instructional materials to primary and post-primary schools on request. It is also charged with organizing conferences and workshops on the use and production of instructional materials to the teaching staff. Additionally, it introduces the teachers to the process of procurement and storage of the materials. The National Educational Research Council in Lagos contributes in no small measure to the improvement of the quality of instruction in the country. It conducts researches, seminars and conferences in the area of instructional media and curriculum for

Improving the quality of instruction and consequently education.

Therefore, with the advent of modern instructional techniques which encompass formal, informal, and non-formal education, the scope of education is widened by yet another important area which is called 'Educational Technology'. Educational Technology concerns Agriculture, Medicine, Languages, Social and natural Sciences.

The importation of instructional materials is not welcome and it is not one of the ways through which the falling standard of our education could be arrested. The Western education being foreign it can only help in paving the way for us to adjust and develop our own system of education relevant to our needs and aspirations. The National Policy and Education (1982:49) article number 84 sub-section (v) and (x) stated that:

> Audio-visual centres will be set up under the auspices of the Federal and State Governments and there will be close cooperation and constant consultation between the centres and all educational institutions for their development and effective utilization.. Radio and Television are products of the technological age designed, among other things, to improve communication. They are also being used for the development and improvement of education as well as for the expansion of instructional techniques. Where the facilities exist, Radio and TV broadcasting will form a permanent feature of the education system and, in this regard, the Broadcasting Unit of the Federal Ministry of Education was turned into an Educational Technology centre.

This section of the article basically speaks of the sophisticated instructional media in schools and the prominence given them which the researcher objects to. This is mainly because of our environmental set up which does not provide for some instructional media installations. For instance constant power failure, non-availability of media facilities such as properly acusted room, dark room and so on.

The technical Education Section, Article No. 50, sub-section III of the National Policy on Eduction reads:

> At the very early phases of the educational system, efforts must be made to inculcate an attitude of respect for an appreciation of the role of technology in society. To accomplish this, elementary technology will be introduced into the school curriculum as early as possible. Pupils will be exposed to using their hands in making, repairing and assembling things. (1982:19)

Instruction at any level of education could be aided by one medium or another, Liman (1984) and quoted by Oluyitan (1984) said "instruction is carried out in cooperation with many kinds of teachers e.g. workers, health educators, community development assistants or agricultural supervisors who may use a range of communication media, comic-books, newspapers, books, audio-tapes, Video-tapes, slides, films, filmstrips, radio and tele ision.

2.2.3. Introduction and Development of Instructional Technique in Teaching.

As early as 1960, when Nigeria become independent of British rule, effort was made to provide quality education for Nigerian citizens. As a result of this, government interest in education was directed towards meeting the needs of the society and the need of the nation at large. Some Nigerian scientists who studied overseas mainly in the United States and Great Britain started some science programmes similar to those they had observed in those countries. This of course, led to the development of some instructional media. Emphasis was therefore placed on using local materials for providing instructional meidia for the teaching of secular subject like mathematics and others sciences (Fafunwa 1974).

This was indeed a good take-off, as it invoked our creative talents to produce instructional media from what we could find within our immediate environment.

Fafunwa (1974:49) contends that:

> ...as a result of this new enthusiasm for science and technology, in the 1960s scientists in U.S.A and elsewhere launched elementary science programmes for primary schools. In 1963 a group of educators and scientists in Nigeria started a similar programme with the accent on local materials and improvised equipment such as jam-

> jars, bamboo microscopes, bamboo cages, etc. The development of mathematics and its instructional aids was by no means as a result of similar experience and encounter.

Rather casual however, the major concern about the educational system has been on how to expand and make education available to a greater number of people, without necessarily lowering the standard or quality of education. There has been an emphasis on improving instruction in the schools particularly because of the high hope Nigeria, like other developing nations, placed on education as a potent instrument for the transformation and modernization of the country.

Even with the millions of Naira, about 40% of the country's budget that the successive Nigerian governments at Federal and State levels invested in their annual budgets in education in the 1970s, the observation of the general populace was that to improve quality of instruction and consequnently that of education was impossible without instructional programmes and methodologies being improved locally.

Thakur and Ezenne (1980) observed that although the Eastern Regional Government spent about 48% of its budget on Education in 1970, the money was still not enough to meet the demands on education.

One of the instructional reforms often advocated as an effective and desirable instrument for meeting the demands of both qualitative and quantitative education in Nigeria was the introduction of Instructional Television (ITV) and Instructional Radio Programmes. The objectives of this programme according to the planners were to introduce primarily the TV for effective instruction and as an attempt to make education accessible to every child, while the Nigerian Broadcasting Corporation transmits "School Broadcasts" as audio lessons presented and meant to reach a large number of students simultaneously and at minimum cost. This is what early Nigerian educational planners planned for a country like Nigeria which is not yet out of the woods technologically, one wonders what magic would make ITV reach every child in Nigeria with its over 25,000 remote villages which do not have good drinking water or good roads nor the much fancied electricity. The planners and designers must do their job taking into consideration our technological orientation.

2.2.4 Availability of Instructional Media in Teacher Training colleges:

The type and amount of instructional media available in a school and their appropriateness or relevance to teaching-learning process is the concern of the Ministry of Education, the Principals and the teachers. Since instructional media are the tools by which a teacher tries to improve the quality of his teaching, they should therefore be provided or made available in sufficient quantity and quality at the right time and place so that teachers could carry out their assignments efficiently (Khal, 1966).

Nigeria has no official institution which primarily deals with the production of instructional media, thus there is no set of standards in Nigeria of available equipment and materials for instructional purposes for the different levels of education. UNESCO Comperative Study of the administration of audio-visual services in advanced and developing countries revealed that there was no national audio-visual institution in Nigeria dealing with the production and distiribution of audio-visual materials. There was only one independent association which was established in 1974 and it

was called "The Nigeria Audio-visual Association." (NAVA). Since the UNESCO (1974) study, there has been tremendous improvement for example on the availability of the instructional media in Nigerian schools. In its policy statement on Education, the Federal Government of Nigeria declared that there would be development of Teachers Resource Centres where school teachers could meet for discussions. These centres (among other functions) would be used for the development and testing of teaching materials, (National Policy on Education, 1977).

With the recent development in instructional media in our institutions, one basic question is how can we provide appropriate yet locally produced instructional media to help us in our teaching - learning processes? Recent researches show that the provision of instructional media vary from one school or college to another. Harcelroad (1959) pointed out that many classrooms did not have the facilities well below the required standard. He however confirmed that resourceful teachers should devise ways of using the audio-visual media despite the unfavourable conditions and added that an environment for learning could be created in almost any classroom.

Brown (1959) contended that teachers were concerned about the ready, available and appropriate instructional materials because, they know such tools influenced teaching and the quality of learning in the classroom.

In a simple survey conducted by the Institute of Education, Ahmadu Bello University (A.B.U) Zaria (1976) on the availability of audio-visual materials in post-primary Institutions in Kaduna State, it was found that only two colleges had flannel board. Most schools had bulletin boards in each classroom and in the principal's office and the staffroom. Slides, filmstrips, tape recorders and motion picture projectors were availabele in some schools while others had virtually nothing. Some globes, maps, charts and models were available too. The survey further revealed that in some schools and colleges some equipment and materials were locked up in the store and not used while in others, they were occasionally used despite the fact that they were readily available. It was also discovered that most schools had radio and television sets, but students did not listen or watch educational programmes as there was no provision for them in most of the schools time-table. Akolo (1976) submits "at times teachers are

not aware of the pieces of materials and equipment in their schools". This is because the teachers do not receive any training in the use of such materials, which is evident of our unpreparedness in incorporating these sophisticated materials in our system.

What we really need are the locally made materials, the ones which we make ourselves, these we can handle, manoeuvre, maintain, and repair when damaged. According to Sodeinde (1976) ..,the most available audio-visual materials are the chalkboards, flat maps, photographs, textbooks, magazienes, journals, library books and other reference materials while the least available are the projected aids."

Ike (1980) submits that large student populations affect the use of media even when they are available. Yet there were more instructional media in instituitions with large population than those with small population."In other words there were not enough instructional media in school and colleges in Imo State". He further revealed that only 38 percent of the 90 post-primary Institutions she studied had instructional media.

Another local study on the availability of instructional media in post-primary institutions

including Teacher Training Colleges in Kaduna State was supported by NAVA in 1979. A section of the report reads:

> Of the 19 institutions with enrolment range from 580-1,550 and 11 with over 1,000 students and 17 over 900 students, nine had record players but only three had a camera each. There were 17 television sets reported. Only one institution was reported to have some fund allocated for instructional media.

Now, this is the situation of instructional media in post-primary institutions and especially in the Teacher Training Colleges in the State.

This indicated that the distribution of instructional media is one sided that is to say only the electronic media are provided. In this case it is especially important that teachers be acquainted with teaching resources and services locally available to them and this should be propotionate to the students population in the college.

2.2.5. Free and Inexpensive Instructional Media:

Free and inexpensive instructional media (having instructional value) can be produced in several different forms:- pamphlets, samples and specimens, maps charts, diagrams exhibits, various types of mountings, discs, discarded cans and cartons, cuttings from magazines and newspapers.

Classroom use of free and inexpnensive materials is equally varied. Teachers should encourage students to read pamphlets and booklets dealing with topics not adequately treated in standard sources. Such materials should be placed in classroom "reading corners" as well as in permanent collections of the school library, instructional material centres or resources centres. This position was advocated by the Federal Ministry of Education Joint Consultative Committee on Educational Technology (1986:6) in the following words:-

> Since the country is so far behind in the use of technology in Education and the foreign exchange for purchasing equipment is not available, a National Festival of Instructional Materials is being organized by the Federal Ministry of Education Joint Consultative Reference Committee on Educational Technology. The main objective of this fesitival is to motivate teachers to use locally available materials to produce instructional materials among which the best may be mass produced and distributed among schools.

The government has taken a positive approach to encourage local production of instructional media for our needs in our schools.

2.2.6 Utilization of Instructional Media in Teacher Training Colleges.

The uses of instructional media could be placed in three broad categories: improving educational quality and relevance; lowering educational costs; and improving access to education particularly in the rural areas. In this section of the review emphaisis is placed on improving educational quality by means of effective use of the available instructional media.

In Kaduna State, the move to improve the use of media was initiated by the Nigeria Audio-visual Association (NAVA). The NAVA Annual Conference report (1978) states that:

> The decision to assist the Ministry of Education Kaduna State, in improving the use of educational media in post-primary institutions was conceived during the NAVAKaduna State Annual Conference.

One of the aims of the National Educational Technology Centre is that:

> The new centre, that is, the National Educational Technology Centre combine the functions of the Federal Schools Broadcasts and the National Resource Centre in addition to its added responsibility of conducting training for Educational Broadcasters and Audiovisual Aids Specialists as well as the running of seminars and Workshops for teachers on effective utilization of modern aids to education (Balogun, 1982)

All these are to help the teacher and the student to use the instructional media effectively in the teaching-learning process.

Iwoh (1978:76) in his investigation into the uses of Audiovisual materials in Teachers colleges in Kano city found that:

The teachers do not use the resources such as agencies around, that could have been helpful to them. Lack of adequate storage was one of the problems. Above all, however, was the fact that many of the teachers had no training whatsoever in the handling of the materials and equipment.

In another study conducted locally by Indiana University tagged 'Nigerian Project' whose aim was to establish communication centre which would be involved in the training of teahchers on how to use the modern techniques and tools to improve teaching, got a negative result. Bālogun (1982) report the finding of the project thus: "The data suggested that radio, television and communication centres have not improved education." The study found out that this was mainly due to lack of knowledge and skill on how to integrate the modern materials and equipment in the teaching and learning process.

However, it is noted by the researcher that a significant advance in the effectiveness of classroom instruction has resulted from the wide spread use of instructional media in teaching and learning. For instance, reading printed materials which some authorities classify as visual education, and listening to discussions or explanations verbally from instructors, become more interesting when suplemented with instructional media (Dale 1956) and (Erickson & Carleton 1965). Events, concepts and process become more meaningful to the learner when a medium is used to help him conceptualize what the printed or spoken words attempt to describe. Based upon the early realization that instructional media provide effective learning many researches have been conducted on the use of instructional mediaalone. Most researches on this topic attempted to highlight the usefulness of instructional media in effective learning.

Blount and Klausamier (1958) emphasized on the fact that instructional media vary in their usefulness in achieving educational objectives. They must be selected in terms of the learning outcome desired. According to these researches, instructional media provide events, concepts or

process that often cannot be studied or understood easily by reading or listening alone. They further revealed that instructional media have instructional values in various content areas; and because facts and information are retained in memory for a longer period when presented in different settings, instructional media, they said promote retention. Therefore, there is little or no doubt that instructional media introduce or bring about variety in teaching; variety itself stimulates a zest for learning and discourages fatigue or boredom.

Among the scholars who contributed towards the use of instructional media in the teachnig and learning process is Marvin. According to Marvin et al (1973), if education is to keep pace with ever increasing knowledge, with new technology, with new ideas and with new skills, an educational pattern which will emphasise the use of instructional media (modern and local) must be developed for efectiveness in both depth and breadth. It is a common belief among many scholars of this field that media encourage learning. Kindler (1970) stresses that students remember:-

10% of what they read

20% of what they hear

KASHIM IBRAHIM LIBRARY

30% of what they see

50% of what they hear and see

70% of what they say

90% of what they see, hear , say and do.

This formulation goes with the old Chinese proverb which says:-

What I hear I forget

What I see I remember

What I do I understand

The last two sentences of the two quotations reveal that these media indeed enhance teaching and learning. But one important thing about their use is the selection, matching and appropriateness in various lessons.

Joseph (1977) observed that instructional media or 'tools' could be classified into categories, one of which is commonly called audio-visual aids. In this category he includes such media as films, filmstrips, pictures, graphs, photographs, records, maps, globes, mock-ups, audio-tapes, terrain boards, radio, opaque projectors, television, flannel board and bulletin board. He further remarks that instructional aids are just what their names commonly suggest -Audio-visual aids to teaching and learning. It is important to note that their most important use is to aid

instruction at all levels of education. Instructional media do not take the place of a good teacher. Rather it is the teacher who makes the appropriate selection in line with his objectives. He ends up by remarking that if the teacher sees these tools as aids, then his teaching will be beneficial.

The use of instructional media apart from the afore mentioned ones could be viewed in the dimension of the present age rapid changes of our society, and in its global change also. Hence education is faced with the challenge of fulfilling the needs of a changing society. Educational problems which have arisen according to Adeyemi (1984) are:- Knowledge explosion, information explosion, expansion of educational institutions, increase in student enrolment etc. She further states that "in order to solve these educational problems, innovative approaches will be integration of educational media into the educational system in Nigeria." Thus there is an urgent need for effective and frequent use of instructional media at all levels of education, particularly the teacher training colleges. This is a technological age, therefore a variety of educational media to support and improve

educational activities in teacher training colleges in particular across the country would be an asset.

Among the Nigerian educational problems listed by Ogunranti et al (1984) are:-

(a) Inadequate equipment, materials and laboratories;

(b) Insufficient school facilities;

(c) Out-moded methodology based on primitive educational tool-technology of talk and chalkboard and book.

Ogunranti further states that:

> The widespread symptoms of these problems are poor learning achievements of pupils as inidicated by the examination measurements, and high wastage in the form of drop-outs.

Instructional media could thus be employed to help solve some of these presing problems. However, it has to be clarified that instructional media are not just a collection and operation of educational materials and equipment or other electronic gadgets. Ogunranti says "it is much more than that as it involves identification of educational problems, needs, resources, procedures and continuous evaluation. Therefore, anylysing the use of media in education is just an aspect of Educational Technology, not the whole of it.

Educational medium in this context is that through which or by which anything educational is accomplished.

According to Davies (1973), for effective use of instructional media the teacher must:

(a) Relate the qualities of the audio-visual media to the demands of the task.

(b) Choose only the necessary media

(c) Understand that pupils learn more with the help of the media if:

(i) Teacher introduces to the pupils materials with intended objectives to be achieved;

(ii) Teacher obtains pupils' participation;

(iii) Teacher uses attention-calling devices like arrows and pointers on visuals especially flat pictures diagrams, charts etc.

(iv) teacher repeatedly exposes pupils to media, the process being an effective reinforcement.

If these steps are followed carefully, they ensure an effective use of each and every medium in the teaching and learning process.

The emphasis place on the importance of instructional media in teaching by educators, psychologists and field teachers has been established by researchers. Schramm (1973) and Hawkridge (1966) had conducted many researches on

instructional television, programmed instruction and film, instructional radio and on some simple media such as filmstrips, slides and audio-tape. Their findings emphasise the value of these media in schools, especially in the teaching-learning process.

According to Dale (1956), instructional media when properly used in the teaching situation, can supply concrete basis for conceptualizing thinking, have high degree of interest for students, make learning more permanent, offer a reality of experience which stimulates self activity on the part of pupils, develop a continuity of thought contribute to growth of meaning and provide experiences not easily obtained through other materials and they contribute to efficiency, depth and variety of learning.

Obviously, instructional media provides the teacher with a means of extending his students' horizon of experience.

Erickson et al (1965) stressed that:

> ...reading a book and memorizing a series of conditions or a list of causes may not be rich enough in meaning; our pupils need actual and realistic, although frequently vicarious experiences to build insight that will serve as a basis for forming new relationships from unfamiliar verbal materials.

They further contended that motion pictures, television and carefully prepared slides-tape sequences would be particularly valuable and therefore suggested that such 'real' experiences be utilized in many teaching situations because they assist the teacher in overcoming the physical difficulties of presenting the subject matter. Erickson et al (1965) thus strongly stressed the need for teachers to turn to additonal resources (films, diagrams, charts, globes, and tapes, to sldides, transparencies, models and real things) to enhance clarity of communication and to increase speed of comprehension.

Ike (1980) and Berlo (1960) contend that learning will only be more effective and efficient when these means (instructional media) are matched during teaching and the matching process will only be complete and the maximum result got when instructional media are used effectively in teaching.

Imogie (1984) contends that with the use of instructional media, educational Technology possesses the following benefits:-

(a) making education more productive by exercising its ability to speed up the rate of learnng; thereby helping the teacher to make

better use of time by taking over some of the teacher's routine job of information transmission.

(b) awaking learner's interest by its ability to arouse the curiousity to know more.

(c) by providing a more scientific base, instructional technology avails us with a framework necessary for designing conditions of learning that are closely based on what is known about how human beings learn.

(d) making instruction more powerful by stimulating reality bringing distant and remote events to students, compressing and expanding time, magnifying or reducing the size of objects and many more.

(e) making learning more immediate by helping to bridge the gap between the world outside and the world inside the classroom.

(f) individualizing diversified ways through which individual learning needs are met rather than administrative convenience.

It is necessary to point out that benefits of the media could be achieved only when instructional technology is viewed largely from the process perspective, whereby the basic instructional technology process could be used to stimulate effective learning system.

In discussing views of reseachers on the use of instructional media in a teaching-learning situation, one must note that Harcelroad (1959) expressed some concern over the non-use of audio-visual materials in the teaching profession. He commented:-

> Despite a considerable history of research and development, the new devices of communication have not been completely accepted by the teaching profession. This has been particularly true of film. While government, industry and such social institutions as Churches and Welfare groups have shown great surprise in developing film communication, acceptance and use of film by teachers have fallen far short of the obvious possibilities.

Harcelroad therefore, attributed the reluctant acceptance of audio-visual materials by most teachers to the fact that the average teacher is still ill prepared to use them, and in fact it is qn acceptabele reason for the non acceptance of instructional media in teaching and learning process to a large extent. But there are situations where the teachers in the schools and colleges are prepared to some extent to use the instructional media which are readily available.

Though researchers pointed out some limitations to the use and effectiveness of instructional media in teaching, an obvious limitation of instructional media is that they do not reflect back to the learner his own performance and/or

that of others. According to Dale (1966) "...instructional aids are inanimate objects, therefore the best they can convey to the learner are retention, reorganization of experiences and meaningful generalization." In spite of all the critique about the use of instructional media, many researchers are of the view that it is only with the help of such media that teaching and learning could achieve its best. This is because instructional media as a technology of education is capable of providing a conceptual framework for planning and organizing learning resources, with a view to realizing specific operationally defined objectives or performance level. This view is backed up by Davies (1973) that,

> ...audio-visual materials can best be viewed as a well disciplined and systematic approach to education and training characterized by expliciteness .

To facilitate better judgement therefore, the teacher must develop professional attitudes towards the selection, matching and intelligent application of instructional media in any instructional situation. The teacher being 'the Chief architect or Principal actor' must be able to select the most appropriate media for his instructional activities. In order to make sure that his objectives are acheieved the selection

has to match the course or subject in mind. It is therefore imperative for teachers to turn to additional resources (instructional media resources, resource persons and real situations of things). With the help of these, instruction will be made clearer and the speed of comprehension or understanding increased.

The best of all instructional media whether modern or local whether in the school building or on a wider scale (outside the school building) is one which gives services and received, in turn, the cooperation and assistance of its clientele. Thus both teachers and students may contribute to the over-all efficiency of any materials' centre by observing the educational resource centres rules, by taking part in the important work of preparing and producing inexpensive and local teaching materials, by critically evaluating and selecting items to add to various collections, and by properly caring for the materials.

The preparation of prospective teacher from the teacher training college up to the university takes many different forms. "One important aspect of teacher education programs is the inclusion of an educational media component. Over 87 percent of the colleges and Universities involved in teacher

preparation require one or more media courses as part of their programmes, while two-thirds of colleges require it for certification" NA VA (1970).

These educational media courses could take the form of regular term or semester courses as the case may be. Schmidt & Cartre (1985) states that:-

> A program for the preparation of teachers includes the use of teaching - learning materials and instructional media in two important ways: Prosepective teachers are instructed in how to devise and use modern technologies in their teaching, and learning modern technologies are utilized by the faculty in teaching students.

The benefits of this kind of background appear to be borne out of researches. Molstad (1974) contends that greater learning results are found when media are integrated into a traditional instructional programme; that less time is required to teach a given topic if instructional media are used. Further research by Sibalwa (1983) supports this position. Another view by Cable (1965) is that:

> Audio-visual materials and equipment are not necessarily labour saving devices. If they provide short cut in the learning process it is only to enable the teacher to give more time to those drills, exercises, instructions and explanations for which his personal influence is indispensible.

The position taken by Cable here is that which emphasises the position of the teacher as an architect of the whole process of teaching and

learning. So, he can encourage the preparation and utilization of inexpensive instructional materials. Instructional media are no substitute for the teacher. Rather they depend on skilful employment by him. Their effective use calls for energetic, imaginative approach by the teacher. His aim should always be to find ways to make his teaching more effective and audio-visual aids or media are means through which this aim could be achieved.

Schmidt (1985) took this position too, and submits that:

> One must ask if there is a difference in educational media production and the utilization of media within a teaching situation. In a study involving student teachers and first year teachers, Jones (1983) found no significant over all relationship between teacher's opinion of the value of media used in the curriculum and the extent of media usage.

Despite the fact that many scholars pointed out the importance of media in education, yet if its preparation is at variance with its use, there seems a lot of ground to cover in the area of production and utilization. Another important point to consider here is the lack of a significant relationship between media usage and the professional training received in media.

Therefore, if Jones (1983), findings are valid, the effectiveness of instruction in terms of the

transfer of learning which takes place between preservice instructional and actual teaching performance must be questioned, and the question is- Do prospective teachers actually practice what they have learned? In the same study of (1985:46) by Schmidt, it was found that "... so little educational media relied upon by the student teachers were the more traditional forms such as bulletin boards, transparencies, and posters." These findings would seem parallel to those of Jones (1983) as indicated earlier on.

On the quality improvement and relevance, the early developers of educational technology were perhaps must strongly motivated by the potentials they believed to exist for educational technology to improve quality of education. Early results almost uniformly disappointed those who held this belief. Reports of research on the instructional effectiveness of media tended overwhelmingly to conclude that there were 'no significant differences' between, for instance, student performance in a class taught by an instructor on the one hand and by that same instructor using any of the medium of instruction (radio and television). On the other hand a number of comprehensive surveys exist according to Jamison

(1977) Chu and Schram (1967) Jamison et al (1974). Schramm (1976), on this point quoted the conclusion made by Jamison (1974)

> A number of students and teachers have an initially unfavourable attitute toward instructional television although the incidence of unfavourable attitudes tends to diminish as institutions gain experience with the medium. After such experience a majority of students have neutral or favorurable attitudes towards instructional television.

In spite of the general findings of no significant difference, there are, nevertheless, occasional examples in which the media have out performed the traditional instruction practices. According to Jamison (1977)

> "part of the reason that so many comparison of media with traditional instruction found to be of equal effectiveness appears to result from the notions of that an outsider can only find perlexing."

These researchers seem to feel that to be scientifically adequate in a comparison of television with traditional instruction, everything should be held constant except the medium: One should have the same lecturer (on and off TV and Radio) same way of lecturing, same sort of pupils in the same environment. As an increasing number of studies and projects begin to expose fully the potential of the media, this study would predict an increasing number of findings, in the area of utilization and quality

improvement. Since according to Froebels' (1973) Educational Theory "the purpose of the educator is to control the growth of a child into a man, just as the purpose of the gardener is to control the growth of a plant into its full flowering", the teacher could achieve this aim with the help of instructional media properly integrated into the teaching-learning process.

2.2.7 Information and Information sharing

Let us consider information and information sharing, an important tool in the process of teaching and learning.

Erickson (1959:182) contends that:-

> Adequate information about available audio-visual materials is one of the basic routes to the facilitation of their use. Ideally, information about materials must be general, specific, up to date, easy to use accurate and repetitive. Any system developed for the publicity of materials ought to meet these conditions and at the same time be feasible locally.

Because of information explosion, information needs to be general as well as specific. That is, teachers need to know in a comprehensive way just what is available for everybody and for all subjects. It is only then that they will be able to know what all the resources are, for special plans. Information can only be specific when it explains that materials have been designated for each subject and for each unit. There is also the

need for information to be repetitive as well as up-to date, accurate and easy to use. This could mean that the information should be brought to the attention of teachers again and again, probably through different approaches in a catalogue, special listenings, etc.

Information should be feasibly locally. This could mean information should include all the events that happen locally, the materials that are made locally, and the teachers and local people should have an easy access to them.

This review has examined some of the aviailable literature on the relevant aspects of availability and utilization of instructional media in considerable details. Furthermore the theoretical divergencies which surrounds instruction at all levels were highlighted. However the researcher's main constraint in compiling this review had been on the scantiness of available literature on the research variables at this particular level, particularly the Teacher Training College. As a result of this, emphasis has slightly been on other aspects of availability and utilization, on which literature is limited. This however, indicated that not much has been done in the area of

educational technology development. And that the place of the teacher in the educational system is not much emphasised. On the other hand eemphasis is shifted to the modern instructional media. This review finds little or no literature which encourages the production and utilization of locally produced materials, most especially in Kaduna State and this forms the basis for the study.

CHAPTER III

DESIGN OF THE STUDY METHOD AND PROCEDURE

3.1 Introduction

For this study, this chapter contains the basic design, of the method and procedure employed in the study. Among the aspects considered here are the study samples and sampling procedure; instrument used; the administration of the questionnaires and how the data were collected and analysed.

3.2 Samples and Sampling Procedure:

The samples for the study were drawn from the eight educational zones in the state. Stratified random sampling method was used in the selection,

and eight teacher training colleges were selected across the state.

The eight eeducational Zones are as follows:

1. Anchau Zone
2. Daura Zone
3. Dutsin-Ma Zone
4. Kaduna Zone
5. Katsina Zone
6. Malum-Fashi Zone
7. Zonkwa zone
8. Zaria Zone

Sampled colleges:

1. Basawa Teachers College, Zaria
2. Daura Teachers College, Daura
3. Kafanchan Teachers College, Kafanchan
4. Kaduna Women Teachers College, Kaduna
5. Katsina Teachers College, Katsina
6. Katsina Women Teachers College, Katsina
7. Manchok Teachers College, Manchok
8. Zaria Women Teachers College, Zaria

The choice of teachers was based on the fact that they are the most important variable in the course of instruction. They are thus the people who are in a better position to know much about the instructional media they use in carrying out

their assignments. The method of selection was systematic on the basis of subject taught in the teacher training colleges. In order to take care of subjects like Home economics and Home Management, women teachers colleges were incduded in the samples.

The choice of the Principals or media personnel was basically because of their administrative roles of procurement, storage and maintainance of the instructional media. The choice of theee categories of reespondents is necessary in order to have a cross-sectional responses of facts which would provide validity and reliable findings.

3.3 Instrument Used:

For the purpose of this study, the researcher developed structured questionnairer to survey the existing instructional media and whether they are effectively used in the training of teachers at the grade II Teacher Training Colleges. Therefore, this particular assessment instrument was meant to be used at grade II Teacher Training College level. The questions in the questionnaire were designed to indicate whether or not instructional media were available and whether they were effectively utilized. Therefore teachers and

Prinicipals who responded to the questions, came up with different responses since the two groups have different roles as far as instructional media administration is concerned. Appendices B - G, show the two questionnaires used and other important documents involved in gathering data for the study.

3.4 Rationale for the Methodology:

It is important to note that the structured questionnaires used in this study was effective for obtaining information on the assumptions raised in the study. It facilitated the process of analysis and some specific conclusions where necessary. The structured questionnaries though did not sometimes yield information of sufficient scope and depth and might not descriminate between fine shades of meaning. Thus to guard our data collection and analysis against the possible shortcomings of the structured questionnaire, a close observation of the availabele media was used. The two instruments helped the researcher in obtaining mrore detailed information. Questionnaire has, however, served as the basic tool in obtaining the necessary information for the study.

3.5 Administration of Questionnaires:

Since the two tools used were not restricted to routine fact gathering, the questionnaires were distributed to the respective respondents by direct contact. This helped the researcher a great deal in having a good return. For instance out of the 104 questionnaires distributed, 78.84% were returned. The research instrument used was simple and the design was clear and straight forward, allowing easy and meaningful interpretation by the respondents.

For the purpose of introducing the researcher and his mission, letters were collected from the Education Department, Ahmadu Bello University and each Zonal Education office to the respective colleges before questionnaires were accepted and responded to. Copies of letters and questionnaires would be found in the Appendices B and C on pages 93 and 100 of this study.

309982

3.6 Data Analysis:

For the purpose of statistical analysis, the data collected were tabulated and percentages of some responses on the items were found and they gave meaning to the data collected.

KASHIM IBRAHIM LIBRARY

CHAPTER IV

FINDINGS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter deals with the results and their discussions alongside with the study's assumptions as put forward in chapter one.

4.2 Assummptions:

The study was based on certain assumptions and premises which have guided the researcher in interpreting the results. The following are the basic assumptions.

4.2.1 That instructional media exist in the Teacher Training Colleges in Kaduna.

4.2.2 That instructional media are not effecitvely utilized by teachers in training the students in their respective colleges.

4.2.3 That availability of instructional media in the Teacher Colleges is the responsibility of the Kaduna State Ministry of Education, the colleges and the teachers.

4.2.4 That there are no trained media personnel in the Teachers Colleges in Kaduna State.

4.2.5 That the exposure of teachers and students to the use of instructional media will affect effective teaching-learning process.

4.3 Procedure of Discussing the Result: :

The procedure emplyed in analysing the various responses by the Principals and teachers is as follows:

Cross-tabulation mostly used showing clearly, columns of name of colleges, dates of their establlishement, equipment and materials they have, observed responses, observed frequencies, sub-totals, grand totals and percentages (%) where applicable.

The figures in the observed responses' columns represent the number of responses from the total number of returned questionnaires from individual college. This clearly indicate the existnence or non-existence of an equipment or material and the extent to which each particular question is true or false.

The figures in the observed frequencies' columns are not put to use.

The sub-totals represent the individual colleges' total responses, while the grand total is the total number of responses obtained from all the sampled colleges. The two totals provided the researcher with the exact figures of what is and what is not available, the extent at which instructional media are used and the truth or otherwise of relevant questions. They also provided the basis for mathematical computation of findings and give simple and easy interpretation of the responses. One hundred percent (100%) was however used as the base-line for all the responses.

4.3.1 Results from Teachers Responses:

Teachers responses mostly deal with availability, uitilization and improvisationof instructional materials.

4.3.1.1 Availability:

This section deals with availability of instructional media in the sampled colleges as responded by the colleges' teachers/heads of department.

Table 4.1:

Equipment and materials in the eight teacher training colleges (sampled colleges) see the next page.

From the table , one could make an inference that the hardware or instructional equipment such as television, radio, overhead projector, motion picture projectors are almost non-existent in the colleges as against the softwares or instructional materials. A typical example in the case of Episcope which show 1.22% as against 51.22% scored by charts could be seen from the table above.

From this example it is therefore found that software materials were more readily available than hardwares.

Although this study is purely a descriptive rather than a comparative one, yet the significant difference in terms of the available instructional media in the colleges could be noticed. Such a big difference could be noticed between what is available in Katsina Teachers College and what is available in Women Teachers College, Katsina, though established in different years (1947 and 1952, respectively). And the total percentage of the two colleges shown yet another big difference, the two scored 24.38% and 6.86% respectively. From the same table it is shown that Women Teachers College, Kaduna Basawa Teachers college, Zaria and Manchok Teachers college have almost equal distribution of instructional equipment and

materials, while Kafanchan Teachers College and Women Teachers College, Zaria, have almost same distribution of the media in descending order.

Another significant finding revealed by this study as indicated from the table above is that students' population and the available media are incomparable or that one is not dependent on the other. This could be found in the case of Women Teachers college, Zaria, which has the largest students population (1,380) and ironically this college has the least available instructional media.

Based on these finding, it is crystal clear that instructional media are glaringly lacking in the teacher training colleges in the state.

In the area of improvisation the table below shows the situation in the college.

Table 4.2

IMPROVISATION OF INSTRUCTIONAL MEDIA.

Materials	Observed Responses	Percentage
Drawings	35	15.41
Cartoons	13	5.73
Photographs	13	5.73
Flash-Cards	15	6,61
Posters	19	8.37
Charts	39	17.18
Diagrams	37	16.30
Maps	28	12.33
Graphs	12	5.29
Mock-ups	3	1.32
Flannelboards	3	1.32
Slides	6	2.64
Film-Strips	-	-
Recordings-tape	2	0.88
Transparencies	2	0.88
Total	227	100.00

In an effort to provide available instructional media, teachers attempted to prepare or produce some instructional materials from materials they

could find within the locality or those that they can make purchase of from the market with minimum cost and use in their classroom teaching. From the above table it is shown that charts, Diagrams, Drawings and maps are prepared by the teachers using the readily available raw materials they could find within their immediate environment. This therefore shows that given the right atmosphere e,g. training, incentives etc, teachers could produce and meet their individual need in terms of instructional media.

From the above finding it is clear that none of them agree with the study's number one assumption that there are available instructional media in the Kaduna State Teachers' Training Colleges.

4.3.1.2 Utilization:

This section deals essentially with the frequency of use of the media, those instructional media that were considered more useful, the readiness of the available instructional media for use (i.e how adequate the retrieval system is and some reasons why instructional media were found to be particularly useful in the teaching-learning process. The responses received on the above issues were presented in different tables in this section for easy interpretation.

Table 4.3

FREQUENCY OF USE OF INSTRUCTIONAL MEDIA.

FREQUENCY	OBSERVED RESPONSES	PERCENTAGE
Regularly	115	31.86
Occationally	171	47.37
Never used at all	75	20.78

The table above shows the frequency at which teachers use instructional media in their instruction. It is found that teachers use instructional aids only occasionally in teaching. This frequency was indicated by 47.37% of the responses. 31.86% of the respondents indicated that they use instructional media regularly, while 20.78% indicated that they have never employed or used instructional media in their teaching assignment.

As far as the use of instructional media in teachers colleges is concerned, it was revealed that instructional media are occasionally used. This is in line with the study's second assumption which says:

That instructional media are least used by teachers in training students, in their respective colleges.

This study on which instructional media are considered particularly more useful in the teaching- learning process, so that they should be provided in greater quantity.

Table 4.4:

Instructional media considered particularly more useful in the teaching - learning process thus they should be provided in large number.

EQUIPMENT & MATERIALS	OBSERVED RESPONSES	PERCENTAGE
Television	25	5.06
Tape recorder	22	4.45
Gramophone	5	1.01
Radio	18	3.64
Motion picture Projector	27	5.47
Overhead Projector	21	4.25
Opaque Projector	2	0.40
Camera	9	1.82
Duplicating machine	20	4.05
Photostating machine	19	3.85
Textbook	29	5.87
Flash-Card	22	4.45
Poster	32	6.48
Globe	27	5.46
Map	20	4.05
Chart	34	6.88
Model	44	8.91
Mock-up	24	4.86
Specimen	10	2.02
Motion Picture Film	19	3.85
Slide	23	4.65
Recording-Tape	26	5.26
Recording-Disc	16	3.24
TOTAL	494	100.00

The table above shows the percentage of the instructional media considered particularly useful by teachers, therefore they should be provided in greater quantity.

From what the percentages of the responses had shown, it was revealed that Models (8.91%) Charts (6.88%) and Posters (6.48%) ranked highest in terms of their usefulness in teaching, while textbooks, motion picture projectors globes and television ranked second then followed by the rest of the equipment and materials in the table.
Another finding revealed from this table is that softwares are considered more useful in instruction and should be provided in greater quantity.

Table 4.5

Readability for use of the available media (i.e how easy it is to retrieve a medium for use at a particular time)

READABILITY OF THE INSTRUCTIONAL MEDIA	OBSERVED RESPONSES	PERCENTAGE
Available at all time	6	8
Available some of the time	26	34.66
Not available most of the time	36	48.00
Not in working condition	5	6.66
Available but no attendant to assist the user.	2	2.66
TOTAL	75	100.00

In table 4.5 above 48.00% responded positively to the third statement that instructional media are not available for use most of the time 34.66% indicated that the media are available sometimes but not at all times they are needed. This revelation means that the retrieval system in the colleges is poor, coupled with the fact that most of them are not in good working condition. This can be seen from the percentages of the responsees. Teachers put forward so many reasons why they found instructional media useful in teaching.

Table 4.6

Reasons why instructional media are found useful in the teaching-learning process.

STATEMENTS	OBSERVED RESPONSES	PERCENTAGE
They can be used to illustrate concepts and principles easily	43	14.98
They are capable of providing general background information of subject matter	48	16.72
New learning materials can be easily presented	23	8.10
They make teaching-learning task easier.	43	14.98
They are good for large and small groups.	65	22.65
They can be used for individual-lised instruction	18	6.28
They are easy to operate.	24	8.36
Students like them.	23	8.01
TOTAL	287	100.00

teachers' responses (4.3); i.e tables of items showing the observed responses and then total number and percentages.

Table 4.7
Financing Instructional Media.

STATEMENTS	OBSERVED RESPONSES	%
1. Ministry of Education allocate specific fund for the purhchaseof instructional media by the college.	2	6.45
2. There is no allocation for the purchase of instructional media from the Ministry.	5	16.13
3. There is adequate fund for media from the Ministry	1	3.23
4. The fund from the Ministry is not regularly supplied.	4	12.90
5. College funds are divided formedia purchase.	1	3.23
6. The college make direct purchase of its media from the market.	2	6.45
7. The college obtain its in instructional media from E.R.C	6	19.35
8. E.R.C should continue to house all the instructional for the State's schools.	5	16.13
9. Instructional media should bestored in each Zonal education office	-	-
10. Because of 2 & 4 above there's noenough instructional in the college.	5	16.13
TOTAL	31	100.00

From the statements listed in the above table, it was revealed that instructional media are good in teaching both small and large group of students. This could be seen in statement number five which has 22.65%. Generally, from what is in the table, it could be concluded that instructional media play a vital role in instructional process.

It is interesting to note the significant finding here that despite the important role that instructional media play in instructional process as indicated in table 4.6, they were not made available in the colleges.

4.4 Results from Principal's Responses or Instructional Media Personnel

This section deals exclusively with the Principals' or instructional media personnel responses and what was found after treating the responses, which is mostly concerned with financing the procurement of instructional media, their physical facilities for effective use, storage and retrieval, maintenance of the media and media personnel. In this section too responses are treated in the same manner as in

As far as funding instructional media is concerned the table above shows the situation in the colleges. It was clearly shown that the ministry does not provide funds for the colleges to purchase instructional media. Instead the instructional media are bought and stored in the Ministry's Euducational Resource Centre in Zaria.

Another finding was that the principals frowned at the ministry's unwise policy of storing instructional media in Zaria. Therefore when a statement was put 'that instructional media should be stored in each Zonal Education Office in the state', many responded on the affirmative, this could be seen from the table (16.13%) Some of their reasons are:-

The centre is too far from anywhere in the state (except the schools in Zaria and surounding)

That proximity should be considered, from the above finding it was indicated that the colleges used some funds from other votes to purchase some instructional media.

These findings therefore did not agree with the study's third assumption which says:

That availability of instructional media is the responsibility of Kaduna State Ministry of

Education. The table below throws some light on the storage of instructional media in colleges.

Table 4.8:
Places where instructional media are stored.

STATEMENTS	OBSERVED RESPONSES	PERCENTAGE
1. Instructional media are kept in a special room designed for media.	1	12.5
2. They are kept in the school's Geography room.	3	37.5
3. They are kept in the school's main store.	3	37.5
4. They kept in the Principal's Office	1	12.5
5. They are kept in any of the classroom.	-	-
TOTAL	8	100.00

From what is shown in the above table, most of the colleges (37.5%) store their media in the college's geography room. In other colleges they store their instructional media in the colleges' main store (37.5%)

It was further found that they have no special room designed to store instructional equipment and materials because it could be seen that they are kept even in the Principal's offices.

Table 4.9:

Maintenance of the Instructional Media

STATEMENTS	OBSERVED RESPONSES	PERCENTAGE
1. Instructional media are inspected after each use.	2	12.5
2. They are repaired when inspection indicate the need for it.	4	25.00
3. Instructional media are maintained regularly	1	6.25
4. Repairs are carried out only when complaints are made about their poor performance.	4	25.00
5. Spoilt instructional media are sent out for repairs.	5	31.25
6. Spoilt instrucitional meidia are repaired in the school by the media personnel.	-	-
TOTAL	16	100.00

Maintenance is mainly carried out when inspection of the media indicates the need or when complaints concerning the poor performance of the instructional media are made. This could be seen clearly in the above table were statements 2 and 4 scored 24% each. The spoiled iinstructional media were mainly sent out for repairs because there were no media personnel in the colleges this was proved by 31.25%.

Even in colleges where they have the personnel, they do not trouble-short with the spoilt equipment at all.

Table 4.10

Instructional Media Personnel.

STATEMENTS	OBSERVED RESPONSES	PERCENTAGE
1. There are instructional media personnel who provide services to the college.	2	10
2. There are no media personnel in the college.	6	30
3. An untrained staff is assigned to take care of the instructional media.	5	25
4. No staff is assigned to take care of the instructional media.	7	35
TOTAL	20	100.00

From the above table statements 1 and 2 indicated by 10% and 30% respectively that the existence of media personnel is very little. Responses in statements 3 and 4 revealed that 25% of the staff who take care of the available media were not trained in the area of instructional technology. Moreover, it was found that in some colleges not even a single staff is assigned to look after the college's instructional media.

Teachers' qualification, years of experience as classroom teachers and professional training received at workshop attended by the teachers are some of the factors that are worthy of note in this study. These are yardsticks for finding out to what extent any of these factors affect the

deligency and proficiency of the teachers in the use of available instructional media.

Table 4.11:

Teachers' Qualifications

QUALIFICATION	OBSERVED RESPONSES	PERCENTAGE
N.C.E	36	43.90
OND/HND	7	8.54
B.Ed/B.A Ed/B.Sc	36	43.90
M.Ed/M.A./M.Sc	3	3.66
TOTAL	82	100.00

The above table shows that the percentage (43.90%) of N.C.E holders is equal to the percentage of Bachelors degree holders (43.90%). The distribution is fair enough. It is likely therefore that performance in the use of instructional media should be affected positively. But where the media were not there, there is nothing that could be done.

Table 4.12

Teachers' Years of Experience.

YEARS OF EXPERIENCE	OBSERVED RESPONSES	PERCENTAGE
0-2	37	46.25
3-5	22	27.5
6-8	15	18.75
9-10	-	-
11 and above	6	7.5
TOTAL	80	100.00

The table above shows that a larger percentage of the teachers have no teaching experience as 0-2 years of experience (46.25%) is considered as a very little experience in teaching profession. The teaching profession matures with long years of service. It could be seen from the table that there was not a single response within 9 - 10 years of teaching experience and there were 7.5% with 11 and above years of experience. The lack of experience could be attributed to the attitude of Nigerians who use the teaching profession as a waiting ground for other jobs they are looking forward to secure.

Table 4.13:

Teachers' professional Training and Workshop Attended.

COURSE/WORKSHOP ATTENDANCE	OBSERVED RESPONSES	%
1. Attended coursee in instructional media.	22	29.73
2. Attended workshop (s) in instrucitional media	6	8.11
3. Obtained professional Training Training in instrucitional media while in teaching in the college.	-	-
4. Obtained professional Training in instrucitional media during pre-service education.	46	62.16
TOTAL	74	100.00

Table 4.13 shows the extent to which lack of prefessional training or attending workshop could affect the use of media. From what is in the table it was found that not a single staff received any instructional training while in the college and that most of the training in instructional media was received during pre-service education (62.16%). It was found also that the workshop organized by the Educational Resource Centre were not attended (29.73%). The NBTC courses were also not attended because the responses (8.11%) is negligible compared with the number of teachers in the colleges.

4.5 SUMMARY OF FINDINGS

There are quite a number of findings that were made after discussing the results. The following are the findings of the study.

4.5.1 It was found that almost all the teacher training colleges in Kaduna State do not have instructional media. This observation was

supported by the responses of both the principals and teachers, (tables 4.1 and 4.2 in chapter four).

4.5.2 It was also found that most colleges make least use of the instructional media where they are available. According to tables 4.3 and 4.5 instructional equipment for instance, motion picture projector, overhead projector, episcope etc, are least put to use, while materials were mostly used. This observation was further supported by tables. 4.1. and 4.2. in chapter four, which showed that there were not enough of such equipment in the colleges.

4.5.3 It was found that due to lack of experience in the field (teaching). low qualification (mostly N.C.E) and the lack of any training in the use of instructional media, the available ones were not fully made use of.

4.5.4. In terms of acquisition it was observed that procurement of instructional media is done mostly through borrowing from the Educational Resource Centre in Zaria.

4.5.5 In the colleges where they have some instructional media, storing facilities pose problems. In some of these colleges instructional media were stored in the college's main store or in the principal's office.

4.5.6 It was clearly observed that there is a poor retrieval system of the media partly due to observation 5.2.5 above and partly due to the long distance from Educational Resource Centre to the various colleges in the state.

4.5.7 It was also found that the colleges' available instructional media were not adequately maintained. This could be due to the above observation, and unqualified media personnel.

4.5.8 It was found that most teachers could not even operate instructional equipment available in their colleges and no assistant to give any assistance to the users.

4.5.9 It was found that most teachers could not improvise enough instructional media they would need for their teaching.

4.5.10 It was also found that the students' population in the colleges does not in anyway reflect the number of instructional media. Likewise the staff strength (teaching staff) does not reflect the number of improvised instructional media.

4.5.11 It was observed that there were no periods specifically assigned to teach students some basics of the instructional media improvisation. Rather, some basics of it were taught along with different subject methods.

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

5.1 CONCLUSION

This study attempts to find out whether Teachers' Training Colleges in Kaduna State have available instructional media. If they have available media do they use them in their instructional process? What could be the reasons for their non-availability? And what could be the reason(s) for their not being used? This shows that the study has one important variable viz. Availability and Utilization of instructional media. This variable was chosen because of the importance attached to the media in improving the quality of instruction.

Towards this end we should once gain examine the assumptions as follows:

(i) That there are available instructional media in the Kaduna State Teachers colleges.This assumption was found to be false because the finding were not in it's favour. This was noted in chapter four, where it was clearly shown that instructional media were not available in teachers colleges in the State.

(ii) That instructional media are least used by teachers in training their students in their respective colleges. This assumption was found to be true, because it was established by many facts in chapter four that instructional media were occassionally used in the teachers' colleges.

(iii) That availability of instructional media in teacher training colleges in Kaduna State is the responsibility of the State Ministry of Education.

The third assumption was found to be untrue, because in the previous chapter it was found out that the Ministry of Education in the State does not provide any special funds for the colleges directly for the purchase of instructional media. Rather, the instructional media were purchased and kept with Educational Resource Centre, Zaria, where individual colleges to to borrow.

(iv) That there are trained media personnel in the colleges who take charge of the available instructional media.

The fourth statement was found to be untrue. Findings of this study in chapter four confirmed that there are no trained instructional media personnel who take care of the college instructional media and possibly assist teachers in operating the equipment and preparing and producing of some materials.

5.2 RECOMMENDATIONS:

Based on the results of this study some recommendations have been made in order to help alleviate the problems on the utilization of instructional media in the Kaduna State, Teacher Training Colleges.

1. The State Ministry of Education should make its policy that all teachers should take part in the courses organized by the educational Resource Centres both in their centre in Zaria and the one they organize at different centres all over the state. Such other centres are Kafanchan, Funtua and Katsina.

2. Zonal Resource Centres should be established at each of the eight zonal education offices, and these zonal resource centres should be provided with qualified media personnel who should be charged with organising seminars and workshops on the use, improvization and maintenance of instructional media.

3. Such seminars and workshops should emphasise on:

(i) Improvisation of instructional media from local materials.

(ii) Equipment operation and maintenance.

(iii) Principles of instructional design.

4. The Kaduna State Ministry of Education should work closely with the National Educational Technology Centre (N.E.T.C) in Kaduna, so as to acquiant itself with their courses and workshops. The Ministry should make arrangement to send their teachers to attend such courses and workshops. For instance the centre runs courses from March through September every year. Therefore, the Ministry should try to design its own academic calender so that holdays coincides with the

periods that such courses are run so that teachers could attend.

5. The Ministry of Education should reward significant performances in schools, colleges and individuals.

6. The Ministry should eencourage the schools and colleges to activily participate in other inservice programmes relevant to instructional media use in order to achieve the aims of the Joint Consultative Committee (J.C.C.) reference committee on Educational Technology.

7. It was found that N.E.T.C. Kaduna and the Division of Arts and Material Development of the Institute of Education, Ahmadu Bello University lend out some of their equipment and materials. Thus, it is recommended that colleges should embark on acquisition through loan from these organizations.

8. Regular workshop for teachers in the rural areas based on their needs should be vigorously mapped out and embarked upon perhaps jointly by the personnel of NETC, Universities and Educational Resource Centres or Teachers Resource Centres as the case may be.

9. All Education students in teachers colleges must take at least introductory courses in Instructional Technology. Here emphasis should be placed on developing the right attitude of mind and the production of simple materials by the teachers.

10. NAVA as a professional body should play a more active role in directing the course of events through research and production of guidelines for the effective use of educational media.

11. Books of varying levels written by Nigerians are needed. There should be simple 'how to do' booklets that the teachers in the rural areas could easily handle. There should be those meant for teachers -in-triaining.

12. The proposed annual festival of instructional materials (J.C.C.) should be supported and used for identifying more local materials.

13. Both NAVA and NETC working together should produce periodic inventories or a bulletin of new or revised materials that should go to the Zonal directorate and insititutions and use as

references. These should be different from the professional journals published by NAVA.

BIBLIOGRAPHY

Adeyemi, M. A. (1984). Strategies for Intergrating Educational Media into Higher Education in Nigeria. Nigeria Audio-Visual Association, Monograph series No.1B:5

Akolo, J. B. (1976). The Place of Technology in Education. Unpublished seminar paper presented at University of Ibadan, Ibadan, Nigeria.

Associateship, Certificate in Education series (1982). Educational Technology. Heinemann, Ibadan, Nigeria.

Association, Nigeria Audio-visual (1974). Reports of its annual meeting Kaduna chapter.

Balogun, et al (1982). Introduction to Instructional Technology. Unpublished work, Institute of Education, Ahmadu Bello University, Zaria, Nigeria.

Balogun, D. A. (1982). Educational Technology and Teacher preparation in Nigeria-Prospects and Problems. Unpublished Seminar paper presented at the Nartional Symposium on prospect and Problems of Educational Technnology in Nigeria, University of Ibadan 27th - 30th March.

Berlo, D. K. (1960) The Process of Communication: An Introduction to Theory and Practice. Holt, Rinehart and Winston Inc. New York U,S.A.

Blount and Klausmeier (1958). Teaching in Secondary Schools 3rd (Ed), Happer and Row, New York, U.S.A.

Brown, J, W. et al (1977:41). Instructional Materials and Methods
McGerow Hill, New York, U.S.A.

Cable, R. (1965:27) Audio Visual Aids. Adlard Coles, London, England.

Chu, G. and Schram, W. (1976). Learning from Television: What the Research says. N.A.E.B., Washington, U.S.A.

Cleary, M. and Packham, S. (1976). Educational Technology Implication for Early and Special Education. John Willy and Sons, London, England.

Dale, E. (1956). Audio-Visual Methods in Teaching. 3rd (ed). The Doyden Press, Illinois, U.S.A.

Davies, I. K. (1973). Competency Based Learning. McGrow Hill, New York, U.S.A.

Educational Communcations Technology Association for (1977_
Educational Technology: A Glossary of Terms. On Definition of Terminologies. 1126 16th Street, New York Washington, D.C. 20036, U.S.A.

Education, Federal Ministry of, (1981:12) 43rd Plenary Session of the J.C.C. on Education held at Premier Hotel, Ibadan, Nigeria 9th-14th.

Education, National Policy on (1977.29). Federal Ministry of Education, Lagos, Nigeria

Education, Institute of (1976) "Availability of Instructional Materials in Post-Primary Institutions in Kaduna State. (Sponsored by NAVA).

Education Institute of (1984:19). Minutes of Annual Report. Ahmadu Bello University, Zaria, Nigeria.

Education, National Policy on (1982:19). Federal Ministry of Education, Lagos, Nigeria.

Educational Technology, Joint Consultative Committee on, (1984:6) Federal Ministry of Education, Lagos, Nigeria.

Erekosima, T. V. (1985). Effective of Instructional Materials in Nigeria Schools Through an Advocacy of Educational Technology. Paper presented at a symposium of the "National Festival on Instructional materials" help at Kaduna, 13 - 15th December.

Erickson, C,W.H. and Carleton, D. H. (1965:12 - 27). Fundamentals of Teaching with Audio-Visual Technology. Mcmillan, London, England.

Ezaenya, E.A. (1984). The Role of Educational Technology in Curriculum Development: The N.E.R.C. experience. Paper presented during the course on "Media and Technology in Teacher Education,

N.E.T.C. 30th, July,-24th, August, Kaduna, Nigeria.

Faufunwa, A. B. (1974:189). History of Education in Nigeria George Allen and Unwin, London England.

Froebels, N.K. (1973). Foundation of Behavioural Research. 2nd (ed) New York Holt Inc. U.S.A

G. Terry P. et al (1977) International Dictionary of Education. Kogan Page, London, England.

Harcelroad, B. L. (1959:57). Audio-Visual Insturctional Materials and Methods. McGraw Hill, 2nd (ed), London, England.

Hawkridge, D.G. (1966). Programmed Learning in Central African Context Faculty of Education Occasional Paper No.7, Salisbury, U.S.A.

Ike, G. A. (1980). Factors Affecting the Use of Instructional Materials in Classroom Teaching in Schools and Colleges in Imo State of Nigeria. Unpublished M.Ed. Project, Ahmadu Bello University, Zaria, Nigeria.

Imogie, I. (1984). "Factors Militating against the Development of Educational Technology in Nigeria. Nigeria Audiovisual Association Monograph series No.1B.

Iwoh, O. O. (1978). An Investigation into the Uses of Audio-visual Materials in Some Selected Teachers Colleges in Kano city. Unpublished B. A. Ed project, Ahmadu Bello University, Zaria, Nigeria.

Jamison, D. T. (1983). Fundamentals of Education Planning: Cost Factors in Planning Educational Technology Systems . UNESCO, Paris, France.

Jones, G.J. (1983) Teaching with Tape. The Focal Press, London, England.

Joseph, F. C. et al (1977), Teaching is Secondary Schools Planning for Competence. Mcmillan, London, England.

Khal, S. G. (1966). Teaching and Learning Processes. New York Inc. U.S.A.

Kinndler, J,E. (1970:46). Use of Learning Aids. Hasting House, New York, U.S.A.

Lewis, J, L. (1965:51. Society, Schools and Progress in Nigeria, McGraw Hill, New York, U.S.A.

Liman, A. (1984). Availability and Utilization of Print and Non-print Materials in Technical and Vocational Schools in Sokoto State, Nigeria. Unpublished M.Ed. Thesis, Ahmadu Bello University, Zaria, Nigeria. P.9-10.

Marvin, D. A. et al (1973). Better Teaching in Secondary School. 3rd (ed), Richard and Winston, London, England.

Molstad, T. (1974). Education Technology. An implication for Early Learners. Croom Helm, London.

Ogizi, A. and Ocho, L. (1981ø. Education in Northern Nigeria George Allen and Unwin, London, England.

Ogunmilade, C. A. (1981). Media in Education. University of Ife Press, Ile-Ife,Nigeria.

Ogunranti et al (1984). Issues of Nomenclature:- "Educational Technology and learning Resources" A paper presented at the J.C.C. Educational Technology Reference committee held in Lagos.

Oluyitan, F. (1984). Mass Media for Mass Education: The Role of Electronic Media in Nation Building. Paper presented at the seminar on "The Role of Mass Media On Mass Education" held at University of Jos, Nigeria.

Schmidt, H. C. and Carter, A. (1985) "An assessment of the Production and Utilization of Instructional Media by Student Teachers. Educational Technology: Magazine for Managers of change in education. xxv (II).30.

Shodeinde, (1973). Communication and Education. McGrow Hill, Toronto, U.S.A.

Shodeeinde, (9173) Communication and Education. McGrow Hill Toronto

Shodeinde, A.T.A. (1976). Availability, use and effectiveness of Audio-Visual Aids in History teaching in Zaria Secondary schools. Unpublished E.Ed. Project, Ahmadu Bello University, Zaria.

Ilanko, A. (1985). Instructional Technology-Its application in schools with particular reference to teacher Training colleges and Primary schools. Paper presented at the "General meeting of Network of educational services centres in Nigeria (NESCN), held at the University of Ibadan, May 6-9. P.5.

Sibdwa C. P. (1983) Audio-visual Aids: An Introduction. Croom Adm London, England.

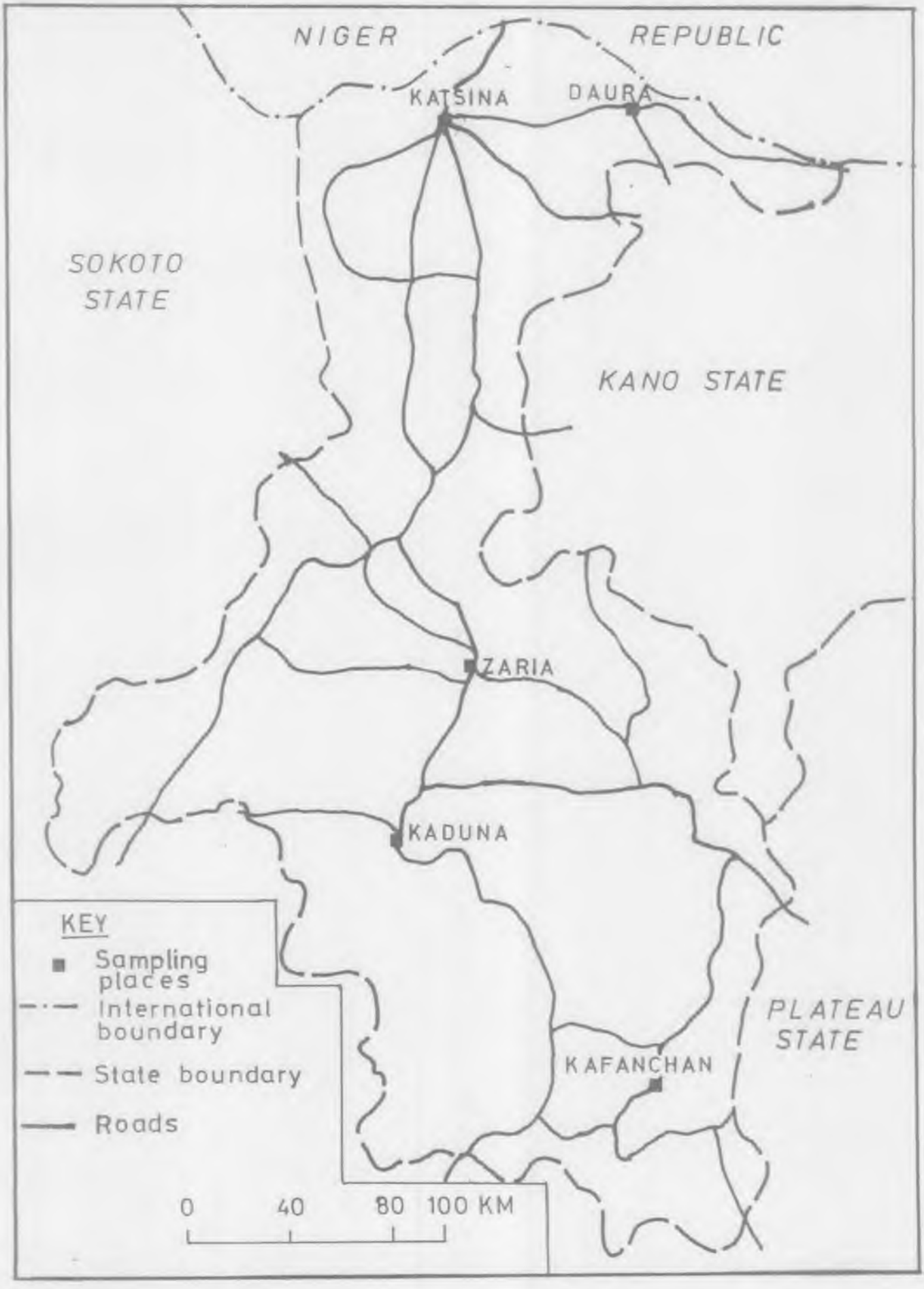
Thakur and Ezenne (1980). 'Philosophical Abstracts' Ahmadu Bello University Institute of Education Zaria, Nigeria.

Unesco, (1974) Report of Annual Meeting of the Committee on Education, Paris.

Woods and Wylie (1976). "The Problems and Prospects of Instructional T.V. in Developing Countries. The case of Nigeria". International Journal of Instructional Media. Vol.6 No.2.

APPENDIX A

KADUNA STATE SHOWING THE STUDY AREAS



APPENDIX B

DEPARTMENT OF EDUCATION

AHMADU BELLO UNIVERSITY , ZARIA

QUESTIONNAIRE FOR PRINCIPALS OR INSTRUCTIONAL MEDIA PERSONNEL OF GRADE II TEACHERS COLLEGES

SECTION A: PERSONAL DATA

1. Rank.....

2. Qualifications. Please tick ( )as applicable

N.C.E. ( )

OND/HND ( )

B.A.Ed/B.A./B.Sc./B.Ed. ( )

M.A./M.SC./M.Ed. ( )

Ph.D ( )

SECTION B: DATA ABOUT THE SCHOOL

3. Name of School.....

4. Date Established.....

5. How many teachers are there in the school?

.....

6. Did any of your teachers attended any course or Workshop in instructional media under you?

Yes/No.....

If yes, how many?.....

If no, why?.....

7. Did any of your teachers attended a course or workshop in which the use of instructional media formed a part?

Yes/No.....

8. What percentage of the time of your media staff is devoted for media duties?.....

9. What is the school's students population?.....

10. Do you teach your students any aspect instructional technology?

Yes/No.....

If, yes, state the number of periods alloted for each of the classes below:

Class III	Class IV	Class V
.....	.....	.....

12. (a) Do you have any allocation for instructional media?

(b) Is the allocation made (Please tick ( ) as appropriate).

(a) Annually ( )

(b) Biannually ( )

(c) Quarterly ( )

(d) Termly ( )

(c) How much is allocated in the case applicable to you?.....

(d) How regular is the allocation:.....

SECTION C: DATA ABOUT INSTRUCTIONAL MEDIA

13. Where are the instructional materials and equipment kept? Please tick ( ) as appropriate.

(a) Instructional media room ( )

(b) Geography room ( )

(c(Any Classroom ( )

(d) School Store ( )

(e)_Principal's office ( )

(f) None of the above ( )

(g) Others. Specify .....

.....

14. Below is a list of statement concerning physical facilities for media, media staff and financing the instructional media in the school. Please tick ( ) True or False as appropriate.

I: PHYSICAL FACILITIES

STATE TRUE OR FALSE IN THE SPACE PROVIDED

(a) There is a special instructional media room in the school, for effective use of the media. ( )

(b) A Classroom has been modified for use of instructional media.( )

(c) Most classrooms have been partially equipped for the use of instructional media. ( )

(d) Plans are underway to adopt a classroom or two for instructional media. ( )

(e) A classroomm is provided for optimum use of all types of instructional media. ( )

II: MEDIA STAFF

STATE TRUE OR FALSE IN THE SPACE PROVIDED

(a)Educational media personnel are not available in the school to provide services to the staff and/or students. ( )

(b) The responsibility for instructional media services is therefore delegated to a staff who has had some training in instructional media. ( )

(c) A staff has been assigned to direct media services, but functions more of a clerk than as a professional. ( )

(d) Professional staff give orientation to other teaching staff in the use of instrucitional media. ( )

III. FINANCING MEDIA/PROCUREMENT

STATE TRUE OR FALSE IN THE SPACE PROVIDED

(a)The instructional media is financed entirely from regularly appropriate Ministry of Education funds. ( )

(b) The instructional media do not have their own specific budget. ( )

(c) Funds for instructional media are inadequate to serve the school's needs. ( )

(d) Finances for instructional media are sufficient to your school. ( )

(e) The budget of instructional media reflect to some degree loug range plans. ( )

(f) The budget for instructional media is prepared, presented to the Ministry of Education and defended by the Principal. ( )

(g) Instructional media are particularly non-existence in the college. ( )

(h) There are very few instructional media inthe college, ( )

(i) Responsibility for procuring instructional media rest entirely with the user. ( )

(j) The college obtain instructional media, through request to the Euducational Resource Centre (ERC). ( )

(k) The supply from E.R.C. reflects the students pupolation of the college. ( )

(l) The shcool purchase its instructional media directly from the market. ( )

(m) The media staff produce all the instructional media needed in the school. ( )

(n) The media staff produce some of the meidia needed. ( )

(o) Individual staff members produce some of the media they need for their own use in the classroom. ( )

IV. STORAGE

STATE TRUE OR FALSE IN THE SPACES PROVIDED

(a) There are particularly no media storage facilitiee available in the school. ( )

(b) Because of (a) above no personnel is specifically assisgned to take charge of the instructional media in the school ( )

(c) The school has storage facilitiesfor current media. ( )

(d) The retrieval system is adequate most of the time. ( )

(e) Space is provided by the school for instructional media store room. ( )

(f) In your own opinion all the instructional media should be centrally located (in the E.R.C.) but borrowed and returned by each school. ( )

V. MAINTENANCE

STATE TRUE OR FALSE IN THE SPACE PROVIDED

(a)There iis proivision for general maintenance of instructional media in the school. ( )

(d) Instructional media equipment are cleaned and repaired only when complaints regarding their openable condition are made by users. ( )

(c) All instructional media are inspected after each use. ( )

(d) They are cleaned and repaired when insption indicates the need. ( )

(e) All spoilt instructional media are sent out for repairs.

APPENDIX C

DEPARTMENT OF EDUCATION

AHMADU BELLO UNIVERSITY, ZARIA

QUESTIONNAIRE FOR SCHOOL TEACHERS (GRADE II TEACHERS COLLEGES)

SECTION A: PERSONAL DATA

1. Department.....

2. Subject taught.....

3. Qualification, tick.....as applicable.

N.C.E

OND/HND

B.A.Ed/BA/B.Sc/B.Ed.

M.A/M.Sc/B.Ed.

Others, please state.....

4. Years of experience as a teacher in post-primary level, please tick ( ) as applicable.

(a) 0-2 years ( )

(b) 3-5 " ( )

(c) 6-8 " ( )

(d) 9-10 " ( )

(e) 11 and above ( )

5. How much academic training in instructional media did you have in your preservice educational career?

Please, tick ( ) a applicable

RASHIM IBRAHIM LIBRARY

(a) Attended workshops ( )

(b) Certificate course ( )

(c) Obtained a professional training ( )

SECTION B: AVAILABILITY OF INSTRUCTIONAL MEDIA

6. Which of these instructional materials soft wares) listed below is/are available to you for use in your classroom teaching. Please, tick ( ) as applicable, and state the quantity.

(a) Text books ( ) Quantity.....

(b) Illustrations-drawings ( ) " .....

-cartoons ( ) " .....

(c) Photographs ( ) " .....

(d) Flash-cards or strips ( ) " .....

(e) Charts ( ) " .....

(f) Posters ( ) " .....

(g) Diagrams ( ) " .....

(h) Globes ( ) " .....

(i) Maps ( ) " .....

(j) Graphs ( ) " .....

(k) Exhibits ( ) " .....

(l) Models ( ) " .....

(m) Specimens ( ) " .....

(n) Mock-ups ( ) " .....

(o) Chalkboard ( ) " .....

(p) Flannelboards ( ) " .....

(q) Bulletin Boards ( ) " .....

(r) Peg-boards ( ) " .....

(s) Motion picture films ( ) " .....

(t) Slides ( ) " .....

(u) Film-strips ( ) " .....

(v) Recordings - tapes ( ) " .....

(w) Transparencies overhead projectors ( ) " .....

(x) Others, please specify:.....

7. Which of these instructional equipment (hardware) listed below is/are available to you for use in your classroom teaching? Please tick ( ) as applicable.

(a) Television sets Quantity

(b) Tape recorders

(c) Grmamophones

(d) Radio sets

(e) Motion picture projectors

(f) Overhead projectors

(g) Opaque projectors/Episcopes

(h) Cameras

(i) Duplicating machine

(j) Photostating machine

(k) Others. Please state

SECTION C: UTILIZATION OF INSTRUCTIONAL MEDIA

8. By means of a tick (✓) which of the instructional equipment and materials you use in the school, regularly, occasionally or seldom.

	Regularly.	occasionally.	seldom
a) Televison	.....	.....	.....
(b) Tape recorder	.....	.....	.....
(c) Grmamophone	.....	.....	.....
(d) Radio	.....	.....	.....
(e) Motion picture projector	.....	.....	.....
(f) Ovehead projector	.....	.....	.....
(g) Opague projector	.....	.....	.....
(h) Episcope	.....	.....	.....
(i) Photographs	.....	.....	.....
(j) Flash-cards or strips	.....	.....	.....
(k) Posters	.....	.....	.....
(l) Charts	.....	.....	.....
(m) Diagrams	.....	.....	.....
(n Globes	.....	.....	.....
(o) Maps	.....	.....	.....
(P) Graphs	.....	.....	.....
(q) Models	.....	.....	.....
(r) Exhibits	.....	.....	.....

(s) Specimens ....

(t) Mock-ups ....

(u) Flannel boards..... ....

(v) Motion picture..... ....

(x) Recordings-Tapes..... ....

-Discs..... ....

(y) Transparencies for

Overhead projectors.... ....

9. Which of these materials listed below do you produce locally, for your use. please tick( ) as applicable.

(a) Illustrations-drawings

-cartoons

(b) Photographs

(c) Flash-cards or strips

(d) Posters

(e) Charts

(f) Diagrams

(g) Maps

(h) Graphs

(i) Mock-ups

(j) Flannelboards

(k) Slides

(l) Film-strips

(m) Recordings-tapes

-Discs

(o) Transparencies

10. How readily for your use are the equipment and materials listed in question 8. Please tick ( ) as appropriate.

(a) Available at all time

(b) Available most of the time

(c) Not available most of the time

(d) Not in working order

(e) Need attendant or opperator to assist you

11. Below is a list of instructional media equipment and materials. Which one/ones should abe provided in greater number because it is or they are particularly useful to you.

Please tick ( )

(a) Television

(b) Tape recorder

(c) Gramophone

(d) Radio

(e) Motion picture projector

(f) Overhead projector

(g) Opa ue projector

(h) Camara

(i) Duplicating machine

(j) Phomtostating machine

(k) Photographs

(l) Flash-cards orn strips

(m) Posters

(n) Globes

(o) Maps

(P) Charts

(q) Models

(r) Mock-ups

(s) Specimens

(t) Motion picture films

(u) Slides

(v) Recording-Tapes

-Discs

12. By means of tick ( ) in the boxes provided please indicate whcich of the materials listed below is/are part of your reason(s) for finding the instructional media you've ticked in question 11 as being particularly useful.

(a) They are easy to operate

(b) New learning materials can be easily presented by usiug them

(c) They can be used for large groups

(d) Students like them

(e) They can be used to illustrate concepts and pirinciples

(f) They are capable of providing general background information for a subject matter

(g) They can be used for small groups

(h) They can be used for individualized instruction

(i) They make teaching task easier others. Please spefiey:.....

APPENDIX D

DEPARTMENT OF EDUCATION

AHMADU BELLO UNIVERSITY, ZARIA

Date.....

.....

.....

.....

.....

Dear _____

Attached herewith is a Questionnaire for an M.Ed. Degree Project. I will be very grateful if you will kindly fill it and return to the bearer. While appreciating your anticipated cooperation, I assure you that your response will be treated in privacy and confidentially.

Yours sincerely,

(SGD)

Abdullahi Tukur K.

APPENDIX E

AHMADU BELLO UNIVERSITY ZARIA

FACULTY OF EDUCATION

Date: 30th June, 1987

The Director

Katsina Zonal Education Office,

Katsina.

Dear Sir,

COLLECTION OF RESEARCH DATA

The bearer Mal. Abdullahi Tukur K. is conducting research in AVAILABILITY AND UTILIZATION OF INSTRUCIONAL MEDIA IN SOME SELECTED GRADE II TEACHER TRAINING COLLEGES IN KADUNA STATE OF NIGERIA. for the degree of MASTER OF EDUCATION.

The Faculty of Education will be grateful if you could permit him/her to conduct classroom experimentation/collect data at.....

.....

Thank you for your continued cooperation with us.

Your sincerely,

(SGD)

DR. FUNSO OLUYITAN

Post-Graduate studies Committee.

APPENDIX F

AHMADU BELLO UNIVERSITY, ZARIA

FACULTY OF EDUCATION

Date: 30th June, 1987

The Director,

Daura Zonal Education office

Daura.

Dear Sir,

COLLECTION OF RESEARCH DATA

The bearer Mal. Abdullahi Tukur K. is conducting research in AVAILABILITY AND UTILIZATION OF INSTRUCTIONAL MEDIA IN SOME SELECTED GRADE II TEACHER TRAINING COLLEGES IN KADUNA STATE OF NIGERIAFor the degree of MASTER OF EDUCATION

The Faculty of Education will be grateful if you could permit him to collect data at DAURA TEACHERS' COLLEGE, DAURA.

Thank you for your continued cooperation with us.

Yours sincerely,

(SGD)

Dr. Funso Oluyitan

Post-Graduate Studies Committee.

APPENDIX G

MOE/ZOZ/GEN.133B/Vol.1/57

6th July, 1987

The Principals,

T.C. Kafanchan,

T.C. Manchok.

COLLECTION OF RESEARCH DATA

MAL. ABDULLAHI TUKUR K.

I am directed to give permission to the above mentioned to conduct a research in your college. Please assist him..

Thank you.

(SGD.)

RICHARD J. B. SUKU

F.E.O. (PRD)

for: Zonal Director,

Zonkwa.

KASHIM IBRAHIM LI