AVAILABILITY AND UTILISATION OF PRINT AND NON-PRINT INSTRUCTIONAL MATERIALS IN TECHNICAL AND VOCATIONAL SCHOOLS IN SOKOTO STATE, NIGERIA

BY

LIMAN, ABDULWAHAB

MASTER OF EDUCATION

1984.

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AN INDEPENDENT STUDY SUBMITTED IN PARRTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF

MASTER OF EDUCATION IN INSTRUCTIONAL TECHNOLOGY.

DEPARTMENT OF EDUCATION
A.B.U
ZARIA
NIGERIA, 1984.

Department of Education
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APPROVAL SHEET

The undersigned certify that they have read, and have recommended to the Faculty Board of Education for acceptance, an independent study entitled "Availability and Utilisation of Print and Non-Print Instructional materials in Technical and Vocational Schools in Sokoto State" submitted by LIMAN, ABDULWAHAB in partial fulfilment of the requirements for the degree of Master of Education.

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D E D I C A T I O N

This research work is dedicated to:-

My wife - Aminatu A. Liman, My son - Abdul-Rashed and daughters Madina and Maryam.

DEPARTMENT OF EDUCATION
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M. Ed.
1984.

A C K N O W L E D G E M E N T

The author wishes to express his sincere gratitude to Dr. D.A. Balogun, Head of Section - Instructional Technology, Ahmadu Bello University, Zaria, whose untiring efforts have made it very possible to present this independent study after such a long time in the face of so many odds.

My sincere thanks also go to the entire M.Ed. students in Instructional Technology, 1982/83 session for their contributions in debating and criticising constructively the initial draft of this proposal.

I am equally grateful to all the Principals, Heads of Departments and the class-teachers of the sampled schools for making it possible to retrieve necessary and relevant data and information for this research.

Thanks also to Mal. Bello Abdullahi of the Post-Graduate school, A.B.U., Zaria, for the time spared in cutting these scripts on stencils, and Mallam Shehu Jibrilla Mani, Principal, Government Schience Secondary School, Gusau; for his moral and material assistance.

Finally, I wish to thank my family for the support and encouragement given throughout the course of this academic pursuit.

A. W. LIMAN.

ABSTRACT

Communication Media in the modern form first appeared in Nigeria when in 1932, under the Colonial Britain, a radio Receiving station was constructed in Lagos. The Development of Media since then has been rapid, following the technological development in various parts of the world which have contact and relationship with Nigeria. Today, electronic media have grown so sophisticated and Audio-Viduals so wide that almost every state of Nigeria has one type or the other of Resource Centre for instructional purpose. It is however not to be construed to mean that these electronic media have been developed for education, they were infact developed outside education but adapted to serve educational needs.

The purpose of this discriptive study is therefore to survey the availability and utilisation of both print and non-print instructional materials in Technical and Vocational Institutions in Sokoto State of Nigeria. By instructional materials, the researcher refers to all forms of information carriers that can be used to promote and encourage effective teaching-learning activities. These are:- Text books, Supplementary books, (readers) work books, reference books, Charts, magazines, maps, journals, periodicals, pamphlets, newspapers, porters, programmed texts and the non-print materials like films, filmstrips, models, mock-ups, globes, slides, pictures, audio and video tapes, records, microfiche etc.

The study is delimited to cover only the Technical and the Vocational Institutions in Sokoto State. This, the researcher feels very necessary in-view of the emphasis that both the Federal and the State governments are placing on the technical and vocational education in Nigeria.

In all, five technical and six vocational institutions were randomly selected for the purpose of this study.

Two types of the structured questionnaires were administered. One directed to the Principals of the two categories of institutions, while the other questionnaire was directed to the Heads of Departments and the Class-room teachers. Questions were designed to seek information at the conscious - surface levels of the respondents; and in all, about fifty-eight respondents were used in the study.

The study investigated the availability and the effective utilisation of the print and non-print Instructional materials in promoting teaching-learning situation.

To what extent are instructional materials available in these institutions?

What about their quantity bearing in mind the students' population of the institutions using them cum the base-line of the number of students per instructional material.

What about their effective utilisation?
Are the materials regularly, occassionallly or seldomly used?

If not, what factors or reasons mitigated against their utilisation. The researcher went further to identify "make" of instructional materials to determine the extent at which local materials are used in our institutions.

The findings of the study among other things revealed that:-

(i) Inspite of the emphasis that both the Federal and the Sokoto State governments are placing on Technical and Vocational Institutions in Sokoto State, many of these schools have no instructional materials. This situation is even wrost with the non-print instructional materials.

(ii) The findings of this study also revealed that when and where some of these instructional materials are available, certain factors mitigate against their use to promote effective teaching-learning situation.

(iii) With regards to the "make" of materials, it was discovered that most of the instructional print and non-print materials are imported from outside the country as against the locally produced ones.

In view of the above findings the researcher gave some suggestions on how to go about the acquisition of instructional materials, their selection criteria and maintainance for the effective use in teaching-learning in our institutions.

Finally, the need for local production of these materials is recommended.

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CHAPTER ONE

INTRODUCTION

1.1

The Federal government of Nigeria is actively involved in providing quality education to the Citizens of the country. This ofcourse is in realisation that no country can develop in any dimension unless quality education is provided to its citizens.

> The Federal government of Nigeria has adopted education as an instrument per-excellence for effecting national development. (National Policy on Education, revised 1982. pg. 5)

In the light of this, the Federal government assumed the responsibility for improving the standard at all levels of education by encouraging the use of modern educational techniques.

This modern educational techniques have therefore been incorporated in all types of education, formal, informal and non-formal education.

In a paper presented at the International Seminar Workshop, sponsored by the Centre for Continuing Education, University of Jos, Nigeria; in 1983. The topic being "Mass Media for Mass Education": The Role of Electronic Media in National Building. Dr. Oluyitan quotes Ingles (1974) that:

> Instruction is carried out in co-operation with many kinds of teachers; e.g. workers, health educators, community development assistants or agricultural supervisors who may use a range of communication media, which have included posters, games, puppets, comic-books, newspapers, books, audio-tapes, video-tapes, slides, films filmstrips, radio and Television.

Media use in every classroom of the educational system of any nation is becoming necessary due to two main factors.

First, the rapid technological development of this era has made the traditional method of instruction, which allows the teacher to walk into the classroom and lecture to the students very unpopular.

Second , the growing school enrolment makes it virtually impossible for the teacher to give individual attention to each student; hence students of today are encouraged to assume an increasing responsibility for their own learning.

Educational technology and the use of various media enable the teacher to give each student the opportunity to pursue his own interest at his own pace and can partially alleviate the problem of increasing classroom population. Balogun et al (1982) state that:

> Effective learning happens at its best when students are actively participating in a variety of learning experiences and activities in which the student is challenged to think creatively about what is to be learned.
> (Balogun et al 1982 p.3)

When educational objectives are stated in the school, these objectives are usually expressed in behavioural terms to be achieved by individual student as quickly as possible, but with consideration to individual differences and learners behaviour. Hence, teachers use varied modern but appropriate techniques which will produce the desired results to the greatest degree.

Bala (1983) quotes William C. Kahl (1966) that:

> Education have the responsibility of seeing that students function in such a way to produce the greatest amount of the desired learning in the shortest possible time at the lowest possible cost, both in terms of money and human efforts.
> (Bitrus Bala 1983)

Developing nations like Nigeria look up to the more technologically developed nations like the United States of America or Great Britian for support. These developing nations should therefore encourage the use of modern instructional techniques (both prints and non-prints) in their educational institutions. Thus, the provision of instructional materials in the classroom will provide the students with learning experiences which otherwise could not have been possible by the traditional lecture method. The usefulness of instructional materials in teaching have therefore been stressed by many educators and researchers. Schramm (1977)

stated that: Instructional materials:-

> Like prints are not specially designed for instruction. They have always held out in their different ways the bright hope of delivering educational information and experiences widely, quickly, vividly with a realism and immediacy that prints could **hardly match.**
>
> **(Schramm 1977)**

It is therefore obvious that the importance of these instructional materials in teaching cannot be over emphasised.

Freedman and Berg (1961) have this to say:

> Audio-visual aids have proved to be very useful in the effective category, as well as in the intellectual.
>
> (Freedman and Berg 1961 p.7)

Studies such as the ones reported by Alan G. Chite (1980), Berg (1961) indicated that a number of factors have made this possible.

First, the pleasure which they give to learning encourages favourable attitudes towards school.

Second , films have proved particularly effective in arising emotion in enabling students to acquire a wide range of identifications with other people and their problems and even in changing attitudes.

Third , films, radio, and Television both in and out of school have been made the basis for teaching discrimination and good taste through the understanding and appreciation of contents, aesthetic values and technical skills.

Instructional media offers today's teachers some unique capabilities for meeting the problems of the increasing classroom population.

"Why do we need to apply media to the business of education today?" This was the question asked by F.Z Gana, former Director, Educational Technology Centre, Kaduna in his article "Effective Educational Media."

F. Z. Gana went further to give some basic reasons:-

i) Myriads of researches that have been conducted into the mechanics of learning have revealed that any instructional process which evokes the involvement of many of the human sensory organs tends to facilitates the permanency of learning.

ii) The pressing problems of the revolution of rising expectations have sparked off and sharpened tastes and demands for quality education.

iii) The explosion of knowledge.

iv) The staggering rate of population explosion.

v) The impacts of mass-media, the radio, the television, the press and cinema, resulting from the booming electronics industry.

Erickson (1965) lists some advantages in using instructional materials in our school thus:-

i) They provide meaningful source of information.

ii) They provide the teacher with interest compelling springboards into a wide variety of learning

iii) They assist the teacher in overcoming the physical difficulties of presenting subject matters.

iv) Instructional materials provide the teacher with the means of extending the horizon of experience. This means, the student is provided with first-hand experience even while in the classroom.

v) They provide the teacher with a list of tools to carry out diagnostic research and remedial work demanded by up-to-date instructional purpose.

(Carton & W.H. Erickson 1965. pg 12 - 27)

With the rapid development of high technology, it is becoming essential for instructional materials to be used in almost every classroom. Printed materials are becoming incapable of prompting the understanding of emotional response which the present technology provides. For example, the emotional impact of the journey of Columbia (rockets) to the moon can not be felt through readingon the pages of papers, or by looking at the flat pictures, but great impact and emotional affection will be felt when the journey is viewed in a film or Television.

It is therefore against this background that the researcher deems it very necessary that studies and researches should be intensified to un-vail the situation in our institutions to discover the availability and the effective utilisation of instructional materials.

1.2 The Problem

The purpose of this study is therefore to survey the situation of instructional materials in schools, but this time with particular reference to Technical and Vocational Institutions in Sokoto State.

The researcher has deliberately choosen these categories of institutions bearing in mind that a lot of emphasises both at Federal and State levels have recently been placed on technical and vocational trainings.

Hence, the establishments of Technical and Vocational Schools and the Federal Colleges of Technology in various states of the Federation.

> Recognising that technical education forms the basis of our technological development, the Federal Government of Nigeria has substantially increased its expenditure on this field, in the 3rd Development plan period. A greater propoortion of educational expenditure will continue to be devoted to technical education by government at both the Federal and State level.
>
> (National Policy on Education Revised copy 1981 pg. 30)

Towards this end, the sokoto state government in 1981

established a seperate Ministry of Science and Technical Education.

This Ministry has under her such institutions as the Technical Secondary Schools; Vocational Centres and Commercial Schools. The availability and the effective utilisation of instructional materials can not therefore be over-emphasised in these types of institutions. For one thing, Technical and Vocational Schools have core courses including plumbing; electrical installation, carpentary, auto-mechanics, electronics, Radio and Television services, Refridgeration etc; another thing, the objectives which are mainly psycho-motor and cognitive in nature can hardly be realised or attained without the availability and effective use of instructional materials.

Dr. Adjai Robinson in his article "Selection and Utilization of Audio-Visual Aids From Local Resources" stated that a survey of the availability of audio-visual aids in post primary institutions in Kaduna revealed that there is very little in our educational institutions and that the few available items are either badly used or not used at all. How far is this situation true of Sokoto State and Technical and Vocational Schools in particular?

This ofcourse is another problem that the researcher wishes to investigate and to identify factors influencing the use of these materials. From there, recommendations based on the findings can be put forward to the Ministry of Science and Technical Education, Sokoto State; on how to improve on the use of instructional materials to enhance

learning to achieve our educational objectives.

Towards this end, the researcher identifies the problems as thus:-

i) Are Instructiaonal materials (prints and non-prints) available in the Technical and Vocational Institutions in Sokoto State?

ii) To what extent or proficiency are these instructional materials used in Technical and Vocational Institutions to effect teaching and learning?

iii) What are the "make" of these materials?

1.3 Significance of the Study.

The problems have been identified as thus:-

i) Are Instructional materials (print & non prints) available in the Technical and Vocational Institutions in Sokoto State?

ii) To what extent or proficiency are these instructional materials used to effect teaching and learning?

With the introduction of the Universal Primary and Compulsory Education(UPE) and the subsequent chance in our educational system (6-3-3-4); schools and colleges have witnessed an astronomical increase in number and population, while the number of qualified teachers have not significantly increased. In the light of this, the traditional talk and chalk method must be replaced by modern instructional techniques in-order to effect meaningful and qualitative education

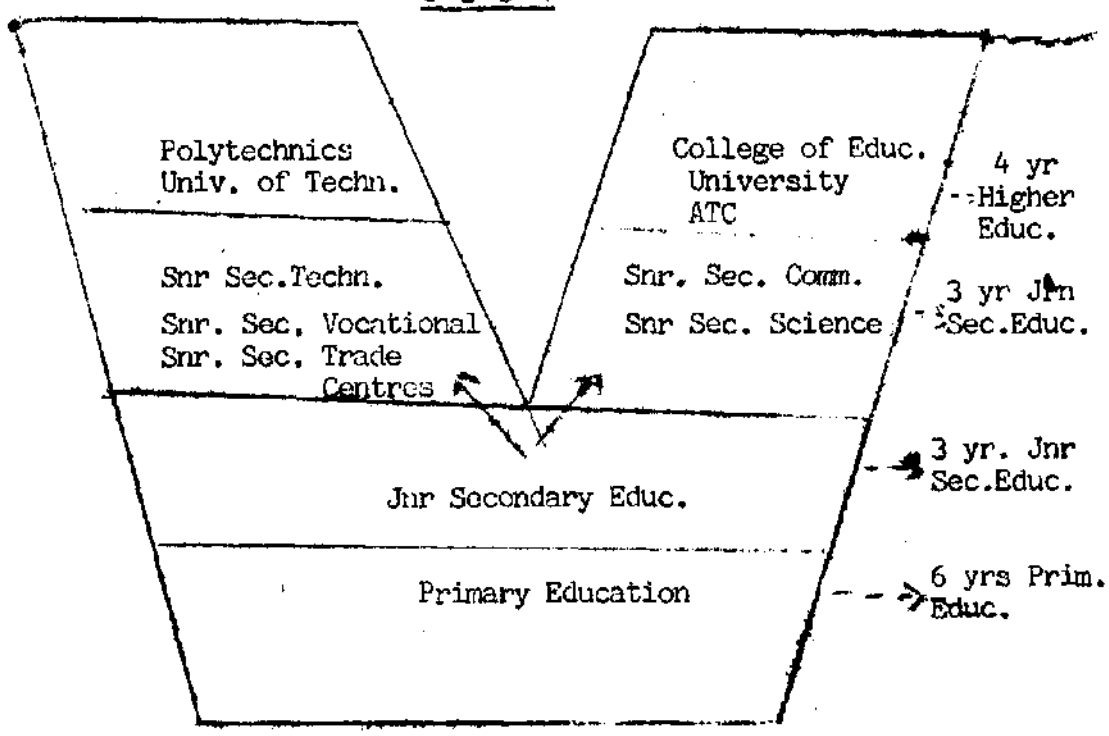
With the introduction of the new system, technical and Vocational Institutions will assume new roles in the three year senior secondary schools. (Fig. 1 refers)

It is therefore the contention of the researcher that print and non-print instructional materials should be given utmost priority in the schools and colleges.

In a situation where most instructional materials are found to have been imported, encouragement should be given to institutions and personnels to develop and produce materials locally.

The study will also stress the importance of the need to develop teachers resource centre where low cost instructional materials could be developed and produced.

Fig. 1
National Policy on Education
6-3-3-4



Nigeria Educational Ladder.

1.4 Basic Assumptions

In an attempt to survey the availability and Utilisation of print and non-print instructional materials in these institutions, the following assumptions are made:

i) It is assumed that since Instructional educational technology is a new discipline in Nigeria, efforts are being made by all agents of education to incorporate and apply the use of modern instructional techniques in-order to bring about an effective teaching and learning.

ii) Sokoto State like any other state in Nigeria has placed great priority on Technical and Vocational training as a corner-stone for other developments and this is justified by the huge amount of money being pumped into technical and vocational instituions. The following facts and figures support the observation:

In 1981, the Sokoto State Budget for Education was N256,770,490 about 43% of the total budget for the year. Out of this amount about 18.5% went to Technical, Vocational, and Science Institutions of the State.

In 1982, the figure stood at - Education - N239,833,504 about 38% of the total budget for the year; while Technical, Vocational and Science had N13,638,200 about 15% of the budget for education.

iii) It is also assumed that Instructional materials (prints and non-prints) are available in Technical and Vocational institutions in the State and that the amount of these materials

largely depend on the size of the school and the population of the students.

1.5 Definition of Terms :-

Terminologies used in this study have been strickly defined within the context.

1.5.1 Media:- Molenda et al (1982) defines media to mean anything that carries information between a source and a receiver with an instructional intent; thus film, television, radio, audio recordings, photographs, projected visuals, printed materials are all forms of media (Molenda et al 1982 pg.8)

1.5.2 Technology:- Defined as a process, a systematic application of scientific or other organised knowledge to practical tasks.

(Molenda et al 1982 pg. 8)

1.5.3 Educational Technology:- (Instructional System technology) is a systematic way of designing, carrying out and evaluating a total process of teaching and learning in terms of specific objectives, based on research in human learning and communications and employing a combinations of human and non-human resources

to bring about a more effective instruction in a given environment.
AECT. 1977, Brown Lewis and Harcleroad 1977, Haney and W 1978)

1.5.4 Learning:- A general term for a relatively lasting change in performance caused directly by experience.

1.5.5 Instruction:- Defined as a deliberate arrangement of experience(s) to help a learner achieve a desirable change in performance.

1.5.6 Print Materials:- Audio-Visual aids that are printed in book forms or on paper such as books, graphics, maps, pictures, photographs.

1.5.7 Non-Print Materials: - These are audio and Visual materials such as sound-motion pictures, slides, films, tapes, cassettes, models that are used to enhance teaching and learning.

1.5.8 Audio-Visual materials:- This term is commonly used to refer to those instructional materials that represent verbal and visual symbols. They include filmstrips, T.V., audio-tapes, Video-tapes, motion-pictures, etc.

1.5.9 Instructional Aids:- Refers to any device that assist an instructor to transmit to the learner facts, skills, attitudes, knowledge, understanding and appreciation.

1.5.10 Imported Materials:- This term is used to denote mass produced materials brought into the country and usually meant for a different audience.

1.5.11 Locally made-materials:- Include all instructional materials produced within the country.

1.5.12 Schools/Institutions :- In this study the term refers to post-primary education i.e. Technical and Vocational education only.

1.5.13 Secondary Technical Schools:- Institutions that offer a combination of academic and technical subjects for a duration of five years.

1.5.14. Vocational Schools:- In this study, refers to institutions where students acquire vocational skills or trade for their livelihood.

CHAPTER TWO

2.1 Review of Literature

This chapter has been sub-divided as follows:-

2.1.1 The development of Western-Education and Instructional techniques in Nigeria.

2.1.2 The need and usefulness of print and non-print Instructional materials in institutions.

2.1.3 Availability and Utilisation of print and non-print Instructional materials in institutions.

2.1.4 Instructional materials and students performances

2.1 The development of Western Education and Instructional techniques in Nigeria.

Western (formal) education was introduced into the country by the Missionaries in about 1840's and with the primary objective of educating the "natives" to become Catechnists, sunday school teachers and pastors. (J.L. Lewis 1965 pg. 51).

Education provisions at that time in question was left in the hands of the Missionary organisations, hence little one wonders that such type of education was not adapted to the needs of the natives nor the aspirations of the students. (Lewis 1965).

The British colonial rulers had no defined policy on how to run schools until about 1900; and between 1900 - 1960 by which time Nigeria got her Independence, the colonial administrators tried to improve the educational system in the country. As a result of this realisation, a few more schools were built and some few secular subjects were added to the curriculum. (Lewis 1965).

Emphasis on Instructional Techniques in Teaching:

When Nigeria became independent of the British Colonial rule in 1960, an effort was made on how to provide quality education for its citizens. As a result of this, government interest was directed in relating education to the needs of the society and the nation at large. Some Nigerian educators who studied mainly in the United States and Great Britian started Science programmes similar to the models they had observed in these countries. This ofcourse, led to the development of some audio-visual aids. Emphasis was therefore placed on using local materials to make the audio-visual aids for the teaching of secular subjects like Science, Maths etc. (Fafunwa 1974).

In this book "History of Education in Nigeria" 1974, pg. 189; Fafunwa 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.
>
> The development of new mathematics for primary and secondary schools was led by an American group. They later ran a series of workshops in various parts of Africa between 1962 and 1967 and produced the famous "Entebbe Maths" series. Nigeria played a leading role in the writing of these text-books which are used by a number of schools in the country.(Fatunwa 1974).

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

Even when the various Nigerian governments at Federal and state levels invested about 40% of their annual budgets in education in 1970's, the observation was that quality instruction was impossible with such amount and without instructional programmes and methodologies.

"For education alone, between 1975 - 1980, Nigeria spent nearly the same amount that she spent on funding its entire second National Development Plan 1970 - 74" Sunday Times April 27th 1975.

"Although the Eastern Regional Government spent about 40% of its Budget on Education in 1970, the money was still not enough to meet the demands on education."

(Thakur & Ezenne 1980, pg. 23)

One of the Instructional reforms often advocated as an effective and desirable instrument for meeting the demands of both quality and quantity education in Nigeria was the introduction of Instructional Television (ITV) and Instructional Radio Programmes. The Instructional Television programme was introduced primarily for effective instruction and as an attempt to make education accessible to every child while the Nigerian Broadcasting Company transmits "Schools Broad Cast," an audio lesson presentation to reach a larger number of students simultaneously and at minimum cost. These programmes are designed and produced by the National Educational Technology Centre (NETC)Kaduna.

2.1.2 The Need and usefulness of Print and Non-Print Instructional Materials in Institutions

The realities of the problems involved in trying to provide quality education side by side with expansion in educational opportunities have become more evident today.

With the introduction of the Universal Primary Education (UPE) scheme and the change in our educational system (6-3-3-4), schools and colleges have witnessed an astronomical increase in enrolments but the number of our qualified teachers have not kept pace with the students' population. With the desire therefore to provide quality education, there is the need for the government to intensify its efforts towards the use of modern techniques in teaching. Teachers have learnt that the art of teaching requires scientific and a "systems approach" on how to produce select and use appropriate new communication media in-order to better explain new subject contents that our modern development demands.

Without a good theoretical rationale, use of specific materials may become simply mechanical, with fond hope that what is presented to learners will eventually become meaningful to them" (Molenda et al 1982)

In addition to the accepted role of teachers as well as in the psychology of learning, their new responsibility to plan efficiently and create an effective and good environment for learning must be considered.

> Instructional media may be used to extend the capabilities of the teacher. According to Bruner (1966) the proper use of media will provide auditory and visual stimulations and assistance to the learner far beyond the capability of a single teacher.

To extend the capabilities of the teachers through the use of print and non-print instructional materials requirc the implementation of the basics of curriculum developments. Dale (1969) confirmed this assertion thus:-

> All teaching can be greatly improved by the use of Audio-Visual materials because they can make the learning experience memorable. When used intelligently, they can promote the most effective kind of learning in adults as well as in children. (Dale, 1969)

A teacher can use teaching aids in various ways to make his instructional efforts more efficient, effective and thus more productive in terms of students learning and growth. He can for instance, use them to arrest and sustain attention, to help him present facts, and information, teach concepts and principles, guide thinking and induce transfer of learning. (Agun 1976)

Anything that facilitates teaching - learning activities should be used in every level of education. Teaching aids have been found to be facilitators of learning and hence their use should be encouraged and emphasised expecially in Nigeria and most other African Countries where formal nursery education is a privilege which very few people can enjoy. It is at the primary school education that the child begins to develop basic behaviours - skills, competencies, attitudes, interest etc; and in acquiring and developing these behaviours, the child will be involved in various learning tasks.

He will be involved in learning factual information, visual identifications, concepts and principles, procedures in performing skilled perceptual motor acts and in developing desirable attitudes, opinions and motivations. (Allen 1967).

Writing in the Daily Times of June 24 1975, E.H. Soremekum of the University of Ife stated that research concerning the use of various learning resources has resulted in the general conclusion that where audio-visual materials are use, learning environment is highly stimulating and the students appear to take a greater interest in learning. Such materials, according to him are invaluable for enrichment purposes or for use with pupils who have had poor educational background. The realisation of the importance of audio-visual materials in education and desire for having these materials and equipment organised and properly utilised have made audio-visual centres acceptable features of University education in developed and the third world countries alike.

Densen and Witten (1966) writing on non-print instructional films and film-strips generalised that:-

Students discover that maximum availability of films and filmstrips provide a front seat to learning, attracts attention to the wonders of the past and present and supplies a wealth of information.

Dr. Funso Oluyitan quotes Ingles (1974) that print and non-print instructional materials can be used in non-formal education. According to him:-

> "Instruction is carried out in cooperation with many kinds of teachers who may use a range of communication media which have included posters, games, audio-tapes, video-tapes, slides, films filmstrips, radio and television."

A combination of print and non-print instructional materials have been found to increase and bring about effective learning. Any instructional material that appeals to more than one sensory modality tends to bring about permenency in learning.

Researches have shown that approximately (85%) eighty-five percent of our learning is acquired through sight (our-eyes); hearing accounts for about eleven percent (11%) while touch, smell and taste combined account for only four percent (4%)

Patterson (1962) indicates that 83 percent of information is received through sight, and that 50 percent of information both seen and heard is remembered in contrast to 20 percent of information heard only.

Researches have also shown that if more senses are involved in the learning of a particular concept, it is more likely that it will be remembered longer.

Kemp (1980) gave reasons for the variety of instructional materials in teaching. According to him:-

> First, because there are different modes of learning and some students find certain methods and materials more appealing or more effective than others, alternative resources are necessary.

Second , certain types of audio-visuals and other resources may be more appropriate than others in support of a given topic. (Kemp 1980 pg.4)

In support of this, Molenda et al (1982) contend that:-

> Most instructional materials use a combination of presentation forms that vary in their degree of realism.

According to them films, that is (motion-pictures) or filmstrips (still-pictures) may be captioned or narrated that is (verbal-symbols).

Researches have also emphasised the value of instructional materials in teaching. Schramm (1977) Hawkridge (1966) have indicated that:-

> Audio-visual materials, when properly used in the teaching situation, can supply concrete bases for conceptual thinking, can add a high degree of interest to students, make learning more paramanent, offer a reality of experience which otherwise could not have been gained and develop a continuity of thought and contribute efficiency, depth and variety of learning.

Turner has outlined several of these. He stated thzt:

(i) They offer experience, giving the learner a basis for thinking and understanding

(ii) They supply a concrete basis for conceptual thinking, hence reduce meaningless word responses of students.

(iii) They overcome limitations of time, space and size helping us to understand things that are too small, too big, too ancient, too slow, too fast.

(iv) They can provide all members of a group with a joint (common) experience.

(v) They show processes which can not other-wise be seen

(vi) They bridge languago barriers and difficulties

(vii) They can help to teach more, up to 35% more in a given length of time.

(viii) They can save time, enabling audience to grasp ideas more effectivaly and faster.

(ix) They simplify, add, emphasise and help clarify difficult points.

(x) They reinforce other teaching methods and materials.

(xi) They improve the efficiency of other methods and the effectiveness of the teaching process.

In another instance, Moemeka(1981) contends that print-media a

apart from its aesthetic quality, has an enduring quality which neither radio nor television messages have. According to him:

> Magazines, journals, books and newspapers can be read at convenience thus allowing for fuller understanding of messages and the preservation of materials that are considered important. (Moemeka 1981)

He continues that the print-media would therefore appear to be suited to the mass education of the illeterate and semi-literate population who are generally slow learners.

Kinder (1959) on the need for students active participation in learning process - before any effective teaching can take place, submits that:-

> Students participation is a necessity for positive learning, whether the lessons are verbalised or visualised and there must be students participation either before, during or after the use of Audio-Visual materials. (Kinder 1959)

In support of this contention, Kemp (1980) asserts that:

> A number of investigations on the effectiveness of audio-visual materials designed for instruction have shown the value of having the learners participate in some way during , or immediately after, the study of the material.

Robert D. Kline (1968) quotes John A. Hannah that:-

> Knowledge is expanding so rapidly that teaching not based on sound research will soon become absolut-, teaching, unfitted for the time. (Robert D. Kline 1967 pg. 2)

Gagne (1966) in his studies of Instructional media stresses the importance of concept presentation. According to him:-

> Designing printed meterials that will effectively instruct is not simply a matter of matching vocabulary. Primarily, it is a matter of organising the statements in such a way that they will perform the instructional presentation that have previously been described. (Gagne 1966)

Why do we need to apply instructional media to the learning situation of today? This was the question posed by F.N. Gana in a paper presented on "Effective Educational Media."

Gana gave his reasons as follows:-

(i) Myriads of researches that have been conducted into the mechanics of learning have revealed that any instructional process which evokes the involvement of many of the human sensory organs tends to facilitate the permanency of learning.

(ii) The pressing problems of the "revolution of rising expectations" - have sparked off and sharpened tastes and demands for quality education by all.

(iii) Knowledge explosion and impolsion.

(iv) The staggering rate of population explosion.

(v) The impacts of mass media - the radio, the television, the press and the Cinema resulting from the booming electronics industry.

(vi) The impact of collective bargaining and trade unionism.

(vii) The drive towards accountability and cost - effectiveness as applied to expenditures in education.

These factors have necessitated the search for better and more efficient methods of instruction. The search which has led to the experimentation with and the development of instructional materials, which emphasize the following elements.

(i) The learner centred curriculum.

(ii) Activities rathor than passivity

(iii) Inter-nalization rather than intellectualism

(iv) Exchange of information and experience rather than dissemination.

(v) The application of the technologies that emphasize self-instructional processes, in the form of teaching machines, Computer assisted instruction , Computer managed instructional system etc.

(vi) Innovative Instructional system - the Core curriculum, the intergrated and the corelated curricular; the Open Access Classrooms; the Ungraded Schools; Team Teaching; Differenciated Staffing; Open Universities,

Correspondence Colleges etc.

Gana went on to say that:

> Educational media imply the media born of the communications revolution which can be used for instructional purposes alongside the teacher, the textbook and the balckboard. These include overhead transparencies, audio tapes, slides and sound slides, filmstrips and sound filmstrips, motion pictures, teaching machines, television, projection, printed materials etc.

All these techniques and innovations are as a result of research into the teaching-learning situation taking into account the learner in terms of his age and ability, as well as the learning environment, to assist the teacher in view of the enormous demand and expectations of the public as regards his profession.

2.1.3 Availability of Print and Non-Print Instructional Materials in Schools.

The type of equipment a school has and the amount of instructional materials are two questions that school administrators and audio-visual directors are always asking. Since materials and equipment are the tools by which a teacher tries to improve the teaching and learning processes, these tools are invaluable and must be provided by the school in sufficient quantity and quality and at the right time and place so that teachers can teach efficiently (Kahl 1966)

As the UNESCO Comparative study of the administration of audi-Visual services in advanced and developing countries showed, there was no national Audio-Visual institution in Nigeria dealing with the production and distribution of Audio-Visual aids. There was only one independent Association as of 1974 up till date called "The Nigeria Audio-Visual Association."(NAVA).

Since there was no official institution dealing primarily with Audio-Visual Aids; there was no set of standards for availability of equipment and materials.

A small number of non-print media such as 16mm projector sound and silent, 8mm sound and silent projectors; Over-head projectors; tape recorders and record players were available in few schools and institutions of higher - learning. Although these media were available, it was left to the individual Institution to obtain what they could afford. Hence, most schools had only one or two of the media items (Chanry J. L. Jongbloed)

Since 1974 study, there has been tremendous improvement in the availability of the non-print instructional materials in Nigerian Schools. The Federal Government of Nigeria, in its policy statement on education declared that there would be development of Teachers Resource Centres where School teachers could meet for discussion. These Centres (among other functions) will be used for the development and testing of teaching materials. (National Policy on Education 1977 pg. 29).

The base collections of instructional materials for schools have been put forward by many educators and authors.

Balogun et al (1982) expressed that a media system should however aim at satisfying at least fifty percent of the request or needs of the users. That is to say, if a user would request some fifty items of Instructional materials, then for an institution of 1,000 students, one would need a total collection of 25,000 items. He further gave the base collections as follow:

1) Pamphlets:- 50(1 - 20 students) in types and quality.
2) Microforms:- Microfilms, Microfiche etc. 200 titles (1 - 5 users).
3) Filmstrips - Sound and silents. 500 items (1 - 3 users)
4) Slides - 4,000 (4 - 1 user)
5) Over-head Transparences - 500 items (4 - 1 user)
6) Posters - Arts & Studt Prints, Maps etc. 1,000 items could be made locally.
7) 8mm, 16mm sound films, Video tapes:- 300 items (1-3 users)
8) Super 8mm films silent 200 titles (1 - 5 users)
9) Audio-Recording - Tapes, Cassettes, disc etc. 1,000 - 1,500 items (1 - 18 per user)

(Balogun et al 1982 p. 143)

In January 1976, Dr. D.A. Balogun made a randomly survey of selected institutions, Advanced Teachers Colleges, Universities and Ministries of Education towards the then proposed two years B.(Ed) degree programmes in Instructional Technology. His findings however showed that very little was being done to train teachers at any level to use even the most elementary aspects of instructional materials. It was also revealed that some of these Ministris of education did not have any visual Aids Centres. In some states, such as Kano and Kaduna; Audio Visual Centres have been started with foreigners in charge, others have not been able to start fully for lack of personnels. Dr. Balogun observed that unless there are in the institutions, people who understand enough of what technology is all about with respect to institutional formal and life-long education, the country is likely to derive minimal returns from such an investment.

A survey of the vailability of audio-visual aids in post-primary institutions in Kaduna revealed that there is very little in our educational institutions. Even the few available items are either badly used or not used at all. Even when provision is made by bodies like the "National Educational Technology Centre at Kaduna, educators just do not use the feilities to the fullest. (Adjai Robinson et al 1981).

A similar study was conducted which sought to find out the availability, frequency of the use and proficiency of the use of Audio-Visual aids in post-primary institutions

in Bida town in Niger State (Fakemegbon 1980).
The study showed that 66.72% of the respondents did not have aids under survey. Over half of the total respondents claimed that each of the 22 Audio-Visuals included in the study was not available. Out of a total of 85 respondents only 25 indicated that they used 16mm motion pictures, 27 indicated that they use over-head transparency. Very few indicated that they used still visual projectors such as Opaque projector, silent filmstrips, sound filmstrips.

The range of non availability of media in this category was from 75% - 94% range.

About 83% indicated that audio-visual media which included radio-records and audio-tapes were not available In the category of motion pictures and Television (live, recorded off the air video-tapes) 8mm and 16mm motion-pictures, the range of non-availability responses ranged from 83.5% - 98.8%.

The level of still-pictures and graphics showed 41.46% availability. While objects and representational media showed about 40% availability.

The similarity in that study and the present research is obvious. Both seek to discover the availability and utilisation of instructional materials. in post-primary schools. The methods for both studies are descriptive and the instruement for both studies are questionnaires.

Ike (1980) in a similar study conducted to find out "the factors affecting the use of Instructional materials in classrooms teaching in schools and colleges in Imo State

of Nigeria." Summarized his findings thus:-

(i) Inadequate funds mitigated against the purchase of new instructional materials and the repair of damaged ones.

(ii) That the Educational Service Board and the Ministry of Education failed to equip schools and colleges with necessary instructional materials.

(iii) That though some schools and colleges have instructional radio and Televisions these materials were not being used by students simply for fear of theft.

(iv) There was also the negative attitudes of teachers in the use of instructional materials.

Ike went further to find out the availability of instructional materials in these institutions. To compute his findings, he grouped all institutions into:- Schools and Colleges with students population of 500 and under. Schools and Colleges with students population above 500.

He came out with a comparative analysis of the two schools as follows:

(i) Institutions with students population of above 500 have more maps, globes, diagrams, charts, bulletin boards, graphs, models, radio sets, T.V., flat pictures motion-pictures, projectors, tape-recorders, films-trips-projectors; Flannel-boards, magnetic-boards and opaque-projectors than those institutions with students population of 500 and under.

(ii) There were more posters, slide-projectors, record-players, cartoons, and over-head projectors in these institutions with students population below 500 than in those institutions with population above 500.

(iii) That qqual number of comics in both schools exist. (Ike, pg. 61)

It was also revealed that there were generally an insufficient instructional materials in schools and Colleges in Imo State, and that the size of the institution did not necessarily influence the availability of instructional materials in such institution.

On frequency of use of instructional materials, Ike (1980 pg. 64) revealed that even when materials were available in schools, teachers did not use them adequately to promote effective teaching and learning. Regarding "make" of instructional materials, his findings also show that about 65 percent of the available materials were identified as imported as against our local instructional materials.

Recent researches show that the availability of instructional materials vary from institutions to institutions. Harcel road(1959) in a similar study disclosed that many classrooms did not have all the facilities and equipment needed for learning, and teaching.

In another survey of Audio-Visual materials in Post-Primary institutions in Kaduna State conducted by the Institute of Education, A.B.U., Zaria (1976); the results

of the survey revealed that only two colleges have flannel-boards, most schools have bulletin-boards but not fully utilised. Slides, filmstrips, tape recorders, motion-pictures were found in few schools. In some schools and colleges, equipment were found either not in-order or locked up in the stores. It was revealed that most schools had radio and T.V. sets, but students did not listen to the educational programmes as no provisions for such were made in the school time-table.

Harcelroad(1959) expressed concerned for the non-use of Audio-Visual materials by teachers in our schools. According to him.

> Despite a considerable history of research and development, the newer devices of communication have not been completely accepted by the teaching profession. This has been particularly true of films.
>
> He went further to attribute this situation to the simple reason that the average teacher is still ill-prepared to use them, and the average school still poorly equiped for them. (Harcelroad 1959). There is therefore a pressing need for a new orientation towards the use of Audio-Visual aids in education. The teacher may be ready and willing to introduce these aids in his lessons, but if they are not available there is hardly anything the teacher can do.

2.1.4 Instructional Materials and Students Performance in Examinations.

Recent research findings reveal that the perfomance

of students in any examination is a function of many variables. It is however regretable to note that more often than not, teachers have always been blamed for the poor performance of students.

It has been shown that lack of use and non-availability of instructional materials in our schools rank high among those factors which deter the educational progress of students.

Akolo(1976) asserted that only 10% of those who go to primary schools are successful in the Common entrance examinations.

Bobinish (1978) in his study on the availability and the use of audio-visual aids in teaching English in Post-primary institutions in Zaria revealed that 61.5% of the teachers used only textbooks and the chalk board in teaching. The study also revealed that only about 15.4% of the teachers made ward-cards and flash-cards jointly with their students.

Ji (1978) discovered that 89% of students in the study he carried out in Gboko, Benue State confirmed that their teacher did not use any audio-visual materials.

Print and non-print instructional materials can be used to increased the quality of classroom learning and with active students participation on the subject and the medium being used, the effectiveness of one medium has always been compared with the other in learning situation.

Mielke(1970) in an experiment depicting two groups of students, one group watching a film and the other group reading from transcripts, found that no significant difference in their post-test performance was recorded The concensus seems to be that presentation format that are more dramatic or documentary are more enjoyable and interesting than simpler format like the talk & chalk method which result in more learning. This finding was supported in a second experiment Mielke(1970) in which the entire group found the presentation on television very enjoyable but when tested on it later, two-third of them failed.

The implication here is that, some of the expensive and sophisticated media have the capacity of improving learning only when and if the teacher using them employs and structure these media to bring about improve learning.

Films, unless it is structured and directed towards learning, can end up as a source of entertainment to the students.

CHAPTER THREE

3.1 Design of the Study:- Methods and Procedure

For the purpose of this descriptive study, the researcher used the structured type of questionnaire in-order to obtain the necessary and relevant data.

The problem was to find out the availability of print and non-print Instructional materials in Technical and Vocational Schools of the then Ministry of Science and Technical Education which immediately after the Military take over in Nigeria in January 1984, was marged and became an arm of the Ministry of Education, Sokoto State.

Two categories of schools were therefore involved; Technical Schools and Vocational Training Centres.

Altogether, there were Seven Technical Schools and Eleven Vocational Training Centres; of which the researcher decided to take a sample of only four technical schools and Six Vocational Training Centres. The selection of these schools was based on the guiding principle that no two schools were selected from the same local government area of the state.

The researcher therefore came out with Ten institutions for the purpose of this study. The institutions are:-

Technical Schools:

(1) Government Sec. Technical School - Gusau
(2) Government Sec. Technical School - Farfaru
(3) Government Sec. Technical School - Lailaba(Argungu)
(4) Government Sec. Technical School - Tundi(Yauri)

Vocational Training Centres

(1) Vocational Training Centre - Danko (Zuru)

(2) Vocational Training Centre - Andarai (Jega)

(3) Vocational Training Centre - Gurbin Baure(Zurmi)

(4) Vocational Training Centre - Ambursa (B/Kebbi)

(5) Vocational Training Centre - Shagari (Yabbo)

(6) Vocational Training Centre - Gummi (Gummi)

The Questionnaire

The design of the questionnaire was structured to obtain 'data from 3 types of respondents; and each type of the questionnaire sought to obtain different and sometimes similar information regarding the availability of print and non-print instructional materials in these schools.

The respondents were:-

a) Principals of Technical and Vocational Schools.

b) Heads of Departments:- 3 from each technical institutions. They were:-

Head of Department of Technical Subjects

Head of Department of Science Subjects

Head of Department of Maths subjects

Two Heads of Departments from each Vocational Training Centre. They were:-

Head pf Department of Vocational Subjects

Head of Department of Science subjects

c) Class room teachers 3 from technical and 2 from Vocational Institutions.

The questionnaire was divided into the following sections.

Section A:- Contained such information like, name of school, type of school, teaching staff strength, students' enrolment, age of school, and the list of various courses offered. The inclusion of these questions among other things were to find out the relationship (if any) between the age of school, students population and the available instructional materials.

Section B:- This section sought to obtain personal information such as educational qualifications, years of experience in teaching, exposure to the design and use of instructional materials expecially, the non-print instructional materials.

It was the contention of the researcher that teachers and heads of Department or anybody who should use any instructional materials to effect learning must have had some knowledge, experience in such instructional materials and have been exposed to their uses; for it is not possible to use any instructional material which you have little or no knowledge of on how and when to use it.

Section C of the questionnaire sought to know the allocation for the purchase of instructional materials i.e. how much was this year's budget for the purchase of instructional materials for your school:

(a) Print materials

(b) Non - print materials.

The section also sought to find-out from the respondents whether or not such allocation was too-little,

little, adequate, too-much, bearing in mind the population of his students.

Sometimes, schools have to acquire instructional materials from other sources e.g. Loan, as funds in the school vote book may be so meagre or little that schools can not purchase everything they needed as instructional materials. Such sources of acquisition could be from the Extension & Support. Services of the Min. of Education Sokoto State; or from other independent bodies such as the Educational Technology Centre, Kaduna, or the British Council, Kaduna.

Section D of the questionnaire sought for such information as the availability of print and non-print instructional materials. List of such materials were given and the respondent was asked to indicate whether or not such materials were available in his school, the quantity and number of such instructional materials and to indicate whether or not such quantity was enough or adequate bearing in mind the population of the school.

Another column was devoted to the "make" of the available instructional materials. This was to enable the researcher to know which of the instructional materials were produced locally and were imported.

The researcher also wished to know where the instructional materials were kept. Towards this end, the respondent was asked to check the appropriate column and tick:-

(a) In the School Library __

(b) In care of staff members __

(c) In the Store or A-V centre ___

(d) In the principals office ___

(e) In care of H. O. D.

Proficiency of use of instructional materials was another area of concern. Respondents were asked to indicate how often the materials were being used in teaching by indicating whether such instructional materials were:-

a) Always used ____

b) Frequently used ___

c) Sometime used ____

d) Rarely used ____

e) Never used ___

Students reaction to instrucational materials followed immediately. The respondents were asked to indicate how the students reacted to such instructional materials during teaching by ticking:-

a) Find the lesson very interesting ___

b) Find the lesson dull ___

c) Do not understand the lesson or concept being taught__

d) Help to facilitate their understanding of the lesson being taught ___

e) See them as means of wasting time __

f) Any other reasons _____

Lastly, certain factors affecting the use of instructional materials were given, and the respondents were simply asked to identify which one/ones applied to his lessons or school. These factors include:-

a) Lack of trained teachers to operate non-print instructional gadgets __

b) Lack of spare-parts to replace damaged parts __

c) Teachers can not make them __

d) Lack of co-operation between teachers and principals __

e) Lack of materials to improvise __

f) Lack of Electricity __

g) Teachers do not know the fuction ___

The questionnaire were reviewed by the Supervisor and necessary corrections were made to avoid ambiguity of language and responses.

Later, these questionnaires were pilot-tested using three institutions of similar levels and the final copies were reproduced, distributed by the researcher. Efforts was made to retrieve all questionnaires from the sampled schools.

The data collected were analysed using the percentage statistics.

CHAPTER FOUR

4.1 Findings and Analysis of Data

This chapter deals with the results of the findings and the analysis of the data collected.

Effort is made to itemise the underlying assumptions that are put forward and each of the assumption is preceeded by the tabulated findings. The researcher however assumed that his respondents, Principals of institutions used in this survey, Heads of Departments and teachers alike were honest in the information given through both structured and un-structured questionnaires and that such information would be treated in confidence by the researcher.

4.1.1 Assumptions as put forward in this study

4.1.1.1 That Print and non-print Instructional materials are available in Technical and Vocational Institutions in Sokoto State.

4.1.1.2 That these print and non-print Instructional materials are utilised to effect teaching and learning.

4.1.1.3 That certain factors other than their availability affect the utilisation of the print and non-print Instructional materials.

4.1.1.4 That most instructional materials (prints and non-prints) are inported from outside the country.

For the purpose of this investigations, institutions under study were grouped into two categories:

(i) Technical Institutions

(ii) Vocational Institutions

The following procedures were employed in analysing the various responses.

The tables that follow show the various columns - i.e. Number of institutions used in this study, Expected response; this implies the total number of responses expected, e.g. in table 1a, the expected response is twelve - that is to say - since there were three H.O.D. from each institution as used in the study, three times four institutions equals twelve expected responses.

The observed responses with instructional materials implies the number of respondents that indicate that such instructional materials are available in their institution(s).

The number of institutions with instructional materials. This column is calculated from the observed cells. For example, if eight is our observed responses with instructional materials, this implies that the number of institutions with instructional materials are 2.67 or 3 institutions (to the nearest whole number).

Fifty-percent is however used as the base-line for availability of the print and non-print instructional materials.

4.1.1.1a <u>Availability of Print and non-print Instructional materials in Technical Institutions.</u>

Tables 1a, 1b and 1c show the various responses collected from the three categories of respondents (i.e. Principals of Technical institutions, Heads of Departments and Teachers).

From these tables 1a, 1b and 1c, one can infer that Print and non-print instructional materials are not available in Technical Institutions as only about 34.00% of the Technical institutions have instructional materials. This is indicated by Principals and Teachers; while the responses of the Heads of Departments showed about 33.33% availability. The difference between these two responses does not show much statistical significance.

Table 1a:- H.O.Ds' Responses = 33.33

Table 1b:- Principals' Responses= 34.00

Table 1c:- Teachers' Responses= 34.00

Σ 101.33

Difference = 34.00 M = 33.77

33.33

0.67

Therefore 0.67% does not show much statistical difference.

Table...19...

Availability of Instructional Material (Prints and and Non-Prints) In Technical Institutions (H.O.D Responses)

Print Materials	No.of Inst.	Expected Resp.	Obser. Resp.with Material	No.of Inst.with Material	Percentage %
Text Books	4	12	9	3	75
Flat Pictures	4	12	6	2	50
Graphic Materials	4	12	9	3	75
Diagrams	4	12	8	3	50
Pasters	4	12	5	2	25
Carteens	4	12	2	1	25
Maps	4	12	10	3	75
Bulletin Boards	4	12	2	1	25
Charts	4	12	9	3	75
Photographs	4	12	6	1	50
Captions	4	12	2	1	25
Flannel Graphs	4	12	3	1	25
Globes	4	12	6	2	50
News Paper/ Magazines	4	12	5	2	50
Comics	4	12	2	1	25
Magic Boards	4	12	0	1	
Non-Prints Slide Sets	4	12	0	0	
Film ector	4	12	2	1	25
Vide settes	4	12	0	0	0
Radio tes	4	12	2	1	25
Film Str	4	12	0	0	0
Verhead sp.	4	12	0	0	0
ague Proj.	4	12	0	0	0
ects	4		6	2	50
dels		12	6	2	50
al	100	300	107	30	33.33

N = 4

Table.....15.....

Availability of Instructional Material(Prints and and Non-Prints) In Technical Institutions. (Principals' Responses)

Print Materials	No.of Inst.	Expected Resp.	Obser. Resp.with Material	No.of Inst.with Material	Percentage %
Text Books	4	4	2	2	50
Flat Pictures	4	4	2	2	50
Graphic Materials	4	4	2	2	50
Diagrams	4	4	3	3	75
Pasters	4	4	2	2	
Carteens	4	4	1	1	
Maps	4	4	2	2	50
Bull Boards	4	4	3	3	75
harts	4	4	2	2	50
hotogr	4	4	1	1	25
aptions	4	4	1	1	25
Flannel Graphs		4	1	1	25
Globes	4	4	2	2	50
News Paper/ Magazines	4		2	2	50
Comics		4	1	1	25
Magic Boards	4	4	0	0	0
Non-Prints Slide Sets	4	4	0	0	
Film Projector	4	4	1		25
Video Cassettes	4	4	0		0
Radio Tapes	4	4	2	2	50
Film Strips	4	4	0	0	0
Overhead Transp.	4	4	0	0	0
Proj.	4	4	0	0	0
	4	4	2	2	50
	4	4	2	2	50
	9	100	34	34	34 %

Table.....1c.....

Availability of Instructional Material (Prints and Non-Prints) in Technical Institutes (Teachers Responses)

Print Materials	No.of Inst.	Expected Resp.	Obser. Resp.with Material	No.of Inst.with Material	Percentage %
Text Books	4	12	8	3	75
Flat Pictures	4	12	6	2	50
Graphic Materials	4	12	6	2	50
Diagrams	4	12	5	2	50
Pasters	4	12	5	2	50
Carteens	4	12	3	1	25
Maps	4	12	8	3	75
Bulletin Boards	4	12	3	1	25
Charts	4	12	9	3	75
Photographs	4	12	7	2	50
Captions	4	12	6	2	50
Flannel Graphs	4	12	3	1	25
Globes	4	12	6	2	50
News Paper/ Magazines	4	12	6	2	50
Comics	4	12	6	2	50
Magic Boards	4	12	1	0	0
Non-Prints Slide Sets	4	12	1	0	0
Film Projector	4	12	2	1	25
Vides Cassettes	4	12	0	0	0
Radio Tapes	4	12	3	1	25
Film Strips	4	12	0	0	0
Overhead Transp.	4	12	1	0	0
Opague Proj.	4	12	1	0	0
Objects	4	12	6	2	50
Models	4	12	6	2	50
Total	100	300	100	34	34.00 %

One significant finding revealed by these tables (1a, 1b & 1c) is that, they all show a fairly equal percentages of Print-Instructional materials as against the non-print materials.

This is showed by the percentages of the averages of the three respondents for such instructional materials as:-

Table 2a

Averages of the Print-Instructional materials for Technical Institutions

Text-books	= 50%
Flat Pictures	= 37.5%
Graphic Materials	= 43.7%
Diagrams	= 43.7%
Posters	= 31.2%
Cartoon	= 18.7%
Maps	= 50.0%
Bulletin Boards	= 31.2%
Charts	= 50.0%
Photographs	= 31.2%
Captions	= 25.0%
Flannel graphs	= 18.7%
Globes	= 37.5%
News papers/Magazines	37.5
Comics	= 25.0%
Magic boards	= 6.2%

The non-print materials are in many institutions lacking as showed by the averages of the three different respondents for the four institutions.

Table 2b

Averages of the Non-Print-Instructional materials for Technical Institution

Slides	-	0%
Film Projector(8mm / 16mm)	-	18%
Video Cassettes	-	0%
Audio tapes	-	25%
Film Strips	-	0%
Over-head Transp.	-	0%
Models		37.5%
Opaque Projector	-	0%
Objects	-	37.5%

The assumption that Print and non-print instructional materials are not available in Technical Institutions in Sokoto State is therefore supported by the above tables and findings.

4.1.1.1b Availability of Print and non-Print Instuctional materials in Vocational Training Centres

Tables 3a, 3b, 3c show the different responses by the Principals of Vocational Training Centres; Heads of Departments and teachers used in this study. Their responses

indicate the availability of Print and non-print instructional materials in this category of institution.

Based on these findings, it is crystal clear that Print and non-Print instructional materials are glaringly lacking in our Vocational Training Centres as evident by the total percentage of 14.66% responses by the Principals; 13.33% by the Heads of Departments and 16.66% by the teachers who directly use them. These figures give an average percentage of 14.88%, which is still below the base-line of availability of instructional materials. Tables 3a, 3b, and 3c refer:

Principals Responses	- 14.66%
Heads of Departments	- 13.33%
Teachers	- 16.66%
	Σ 44.66
	M = 14.88%

This figure is still below the base-line of availability of Instructional materials.

3a

Availability Instructional Material (Prints and Non-Prints) in Vocational Training Centres (Principals Responses)

Print Materials	No. of Inst.	Expected Resp.	Obser. Resp. with Material	No. of Inst. with Material	Percentage %
Text Books	6	6	2	2	33.33
Wall Pictures	6	6	2	2	33.33
Graphic Materials	6	6	1	1	16.66
Diagrams	6	6	1	1	16.66
Posters	6	6	1	1	16.66
Carteens	6	6	1	1	16.66
Maps	6	6	1	1	16.66
Bulletin Boards	6	6	2	2	33.33
Charts	6	6	2	2	33.33
Photographs	6	6	1	1	16.66
Captions	6	6	0	0	0
Flannel Graphs	6	6	1	1	16.66
Globes	6	6	0	0	0
News Paper/ Magazines	6	6	0	0	0
Comics	6	6	0	0	0
Magic Boards	6	6	0	0	0
Non-Prints					
Slide Sets	6	6	0	0	0
Film Projector	6	6	0	0	0
Vides Cassettes	6	6	1	1	16.66
Radio Tapes	6	6	0	0	0
Film Strips	6	6	0	0	0
Overhead Transp.	6	6	0	0	0
Opague Proj.	6	6	2	2	33.33
Objects	6	6	2	2	33.33
Models	6	6	2	21	14.6
Total	150	150	22		

Table.....3.5.

Availability of Instructional Material (Prints and and Non-Prints) In Vocational Train. Centres (H.O.D. Responses)

Print Materials	No.of Inst.	Expected Resp.	Obser. Resp.with Material	No.of Inst.with Material	Percent %
Text Books	6	12	4	2	33.33
Flat Pictures	6	12		2	33.33
Graphic Materials	6	12	2	1	16.66
Diagrams	6	12	3	1	16.66
Pasters	6	2	3		
Carteens	6	2	1		
Maps	6	12	4	2	33.33
Bulletin Boards	6	12	1	0	0
Charts	6	12	2	1	16.66
Photographs	6	12	2	1	16.66
Captions	6	12	0	0	0
Flannel Graphs	6	12	0	0	0
Globes	6	12	2	1	16.66
News Paper/ Magazines	6	12	2	1	16.66
Comics	6	12	0	0	0
Magic Boards	6	12	0	0	0
Non-Prints Slide Sets	6	12	0	0	0
Film Projector	6	12	0	0	0
Vides Cassettes	6	12	0	0	0
Radio Tapes	6	12	1	1	16.66
Film Strips	6	12	0	0	0
Overhead Transp.	6	12	0	0	0
Opague Proj.	6	12	0	0	0
Objects	6	12	2	3	33.33
Models	6	12	2	1	16.66
Total	150	300	41	20	13.33

Table.....

Availability of Instructional Material (Prints and and Non-Prints) in Vocational Centres (Teach Resp ...ers)

Print Materials	No.of Inst.	Expected Resp.	Obser. Resp.with Material	No.of Inst.with Material	Percentage %
Text Books	6	12	2	2	33
Flat Pictures	6	12	2	1	16.66
Graphic Materials	6	12	4	2	33.33
Diagrams	6	12	3	2	33.33
Pasters	6	12	2	1	16.66
Carteens	6	12	0	0	0
Maps	6	12	2	1	16.66
Bulletin Boards	6	12	2	1	16.66
Charts	6	12	2	1	16.66
Photographs	6	12	2	1	16.66
Captions	6	12	0	0	0
Flannel Graphs	6	12	0	0	0
Globes	6	12	2	1	16.66
News Paper/ Magazines	6	12	2	1	16.66
Comics	6	12	0	0	0
Magic Boards	6	12	0	0	0
Non-Prints Slide Sets	6	12	0	0	0
Film Projector	6	12	0	0	0
Vides Cassettes	6	12	0	0	0
Radio Tapes	6	12	2	1	16.66
Film Strips	6	12	0	0	0
Overhead Transp.	6	12	0	0	0
Opague Proj.	6	12	0	0	0
Objects	6	12	4	2	33.33
Models	6	12	4	2	33.33
Total	150	300	35	19	16.66

Table 4a

Averages of the Print Instructional materials for Vocational Training Centres

Text-books	-	16.66
Flat-Pictures	-	13.88
Graphic materials	-	11.10
Diagrams	-	8.88
Posters	-	11.10
Cartoons	-	2,77
Maps	-	11.10
Bulletin Boards	-	5.55
Charts	-	11.10
Photographs	-	11.10
Captions	-	2.77
Flannel-graphs	-	0.00
Globes	-	8.33
News papers/Magazines	-	5.55
Comics		0
Magic Boards		0

Table 4b

Non Print Materials

Slides	-	0
Film Projectors	-	0
Video Cassettes	-	0
Audio Tapes	-	8.33
Film Strips	-	0
Over-head Transp.	-	0
Models	-	33.88
Opaque Projector	-	0
Objects	-	17.72

From the above analysis and figures in tables 3 and 4, it is evidently clear that the assumption that print

and non print Instructional materials are lacking in Vocational Training Centres in Sokoto State is supported.

4.1.1.2 Assumption

That Print and non-print instructional materials are adequately utilised to effect teaching and learning in Technical and Vocational Institutions in Sokoto State.

The tables below (tables 5a, 5b) show the frequency of use of the print and non-print materials in technical and Vocational institutions.

Table 5a

Print Instructional materials

Frequency	Observed Responses	Percentages
Always	400	52.08
Frequently	260	33.85
Sometimes	60	7.81
Rarely	38	4.95
Never	10	1.31
Total	768	100.00

N = Expected Responses = 768

Table 5a shows the frequency of use of the print instructional materials. Using the 50% as the yardstick or base-line for measurement, it is clear that the available print instructional materials are always utilised in Technical and Vocational institutions in Sokoto State. The table shows that out of the 768 expected responses, 400 or 52.08% indicated that print-materials are always used in the classroom; 33.85% indicated frequently used; 7.81% indicated that these materials are sometimes used. 4.95% indicated that they are rarely used and 1.31% indicated never used.

Table 5b

Non-Print Instructional Materials

Frequency	Observed Responses	Percentage
Always	7	1.62
Frequently	20	4.63
Sometimes	30	6.94
Rarely	75	17.36
Never	300	69.44
Total 666	432	100.00

N = Expected Responses = 432

In table 5b, we observed a reversed situation with the non-print instructional materials. The table shows that out of the total 432 expected responses, 300 or 69.44%

indicated that non-print instructional materials are never used in technical and Vocational institutions; 17.36% indicated rarely used, 6.94% indicated they are sometimes used, 4.63% indicated frequently used while 1.62% indicated that the non-print materials are always used.

From these tables, it is however clear that while the available print instructional materials are always used to effect teaching and learning in Technical and Vocational institutions, non-print instructional materials are never at all used.

The researcher is obliged to conclude that the available print instructional materials are adequately utilised in Technical and Vocational institutions in Sokoto State while the non-print materials are never used. Reasons for this will be revealed in our assumption three.

4.1.1.3 Assumption

That certain factors other than availability affect the utilization of print and non-print instructional materials in Technical and Vocational institutions in Sokoto State.

Table 6 shows the percentage-rank of factors affecting the use of print and non-print instructional materials in Technical and Vocational institutions.

Table 6

Factors Affecting the use of Print & Non-Print materials as expressed by the Respondents in Percentage

Factor	Expected Responses	Observed Responses	Percentage %
1. No trained teacher to operate them	100	45	45%
2. Lack of fund to buy spare parts	100	80	80%
3. Lack of Electricity	100	60	60%
4. Teacher have no interest in using them	100	30	30%
5. Teacher does not know their function	100	35	35%
6. Lack of cooperation between Principal and teacher	100	29	29%
7. Lack of spare parts	100	75	75%
8. Teacher can not make them	100	40	40%
9. Teacher can not operate them	100	50	50%
10. Lack of security of instructional materials	100	45	45%

Table 6 shows in percentages the various factors that affect the utilisation of print and non-print instructional materials.

Lack of fund to buy spare parts (80%) coupled with the lack of spare-parts to replace damaged parts(75%) have the

highest responses as reasons or factors affecting the use of instructional materials. Lack of Electricity has 60% responses; teacher can not operate them has 50% responses while lack of security of instructional materials has 45% responses. The least response is received by the lack of co-operation between Principal and teacher using the instructional materials.

4.1.1.4 Assumption

That most Print and non-print instructional materials are imported from out-side the country.

Table 7

'Make" of materials as expressed by the Respondents

Make of Instructional Materials	Observed Responses	Percentage
Locally produced	350	29.17%
Imported	850	70.83
Total	1200	100.00

N = Expected Responses = 1,200

This table reveals that out of the 1,200 expected responses, 850 indicated that print and non-print instructional materials in these institutions are imported. When computed, this figure gives 70.83% as against 29.17% of materials that are produced locally as instructional materials.

The researcher therefore concludes that the assumption that most instructional materials are imported from out-side the country is supported as revealed in table 7.

CHAPTER FIVE

5.0 Summary, Findings And Recommendations

5.1 Summary

This study is an attempt to find out the availability and utilization of print and non-print instructional materials in Technical and Vocational Institutions in the Science and Technical Division of the Ministry of Education, Sokoto State.

Two variables are found most important in the study. These are the availability of such print and non-print instructional materials and their utilization - that is to say, whether or not these instructional materials are effectively utilised to promote teaching and learning.

Towards this end, the following assumptions were put forward in the study:

(i) That print and non-print instructional materials are available in Technical and Vocational Institutions in Sokoto State. This assumption was however not supported or was found other-wise when findings were analysed. It was revealed that print and non-print instructional materials are not available in the Technical and Vocational institutions in Sokoto State.

(ii) The second assumption as put forward was that print and non-print instructional materials are utilised to bring about an effective teaching-learning situation. The assumption was not

supported as findings revealed that only the few available print materials are effectively utilised to promote teaching and learning.

(iii) Findings of the research also revealed that certain factors other than the availability of instructional materials affect the utilization of expecially the non-print instructional materials.

(iv) With the 'make' of materials, the research revealed that most of the materials in Technical and Vocational Institutions in Sokoto State were imported from outside Nigeria.

5.2 Findings and Observations

A number of findings and observations were made at the end of this study. These findings are itemised below:

5.2.1 Many Technical and Vocational Institutions in Sokoto State have no instructional materials of both print and non-prints. This findings is supported by the responses of Principals 34.00%, Heads of Departments 33.33%, and Teachers 34.00%. When sumed-up and averaged showed that 33.77% of the technical Institutions have Print and non-print instructional materials, while responses on availability of these materials in Vocational Institutions showed only 14.66%. The responses of the Heads of Departments and Teachers of Vocational Institutions showed an availability of 13.66% and 14.88%

respectively. When sumed-up and averaged, the three figures gave an average of 14.88%, yet below the availability base-line of 50(per-cent).

5.2.2 When print and non-print Instructional materials were treated seperately, it was found that technical Institutions have a higher percentage of print-instructional materials than the Vocational Institutions.

Tables 2a,b and 3a,b refer. With the non-prints, it was discovered that many Institutions both Technical and Vocational had non of these materials.

5.2.3 Asked why most Institutions have no instructional materials and especially the non-prints, most principals indicated that the Science and Technical Division of the Ministry of Education, among other responsibilities is charged with providing them with instructional materials, but such materials were not purchased nor provided by either the Division of the Science and Technical Education of the State Ministry of Education Sokoto, or the Federal Ministry of Education, Lagos.

5.2.4 Most Instructional materials and especially the projected ones were not used in teaching as indicated by the Principals for not enough fund was given to institutions to purchase them.

5.2.5 Asked if they attempted other sources of acquisitions i.e. through loans from independent organisations, some principals and Heads of Departments indicated that they

were not aware of where to borrow these materials and equipment, nor did they know the procedure. Still some indicated that they failed to borrow the projected equipment and their accompanying materials or software because their institutions are located in rural areas where there is no electricity nor a stand-by generating plant.

5.2.6 Some teachers alleged that their principals did not provide money for which to improvise necessary instructional materials or embark on low-cost teaching aids with the use of local materials. They alleged that their principals have not even settled their out-standing claims as a result of which they were not ready to travel out of station to either borrow or collect teaching aids. Some of these allegations were however refuted by some principals who categorically stated that no fund was given under sub-head 2, to settle teachers claims and over-nights.

5.2.7 It was also observed that there was a high percentage of imported instructional materials against the locally produced ones. (Table 5 shows that out of the expected 1,200 responses, about 850(70.83%) responded that instructional materials and equipment were imported from outside the country while only 29.17% were produced locally.

5.2.8 On the issue of factors affecting the utilisation of print and non-print materials and equipment, the following reasons were given for lack of effective use of these materials.

5.2.9 Lack of funds to buy spare parts. This is supported by the lack of enough vote for the purchase of materials.

5.2.10 Lack of spare parts to replace the damaged ones.

5.2.11 Lack of maintainance of the available instructional materials. This explains why the existing ones are either bad or not functioning.

5.2.12 Lack of electricity. Many of these institutions are located in rural areas where there is no electricity and where stand-by generator is found, it was not functioning.

5.2.13 In some instances, teachers cannot operate the projected instructional materials as they are not knowledgable about how the equipment function.

5.2.14 Lack of security of materials in the institution.

5.2.15 Teachers cannot improvise materials.

5.2.16 Lack of co-operations between the Principal, and/or Heads of Departments and the teacher using the materials.

5.2.17 Some teachers explained that they could not take down their students to listen to educational programmes transmitted by the National Educational Technology Centre, Kaduna and similar school programmes by Rima Radio,

Sokoto because instructional Television or a transistor radio is not available in their schools. This explains why Principals failed to indicate this on the school time-table.

5.3 Recommendations

Based on the findings of this work, the researcher deems it necessary to give some recommendations in-order to alleviate the problems of education in Sokoto State and Nigeria in general.

5.3.1 One of the greatest problems as the findings of this research revealed is the non availability of fund to meet the purchases of print and non-pring instructional materials in Institutions and in the Division of Extension and support Services (DESS). It is therefore recommended that enough money should be made available to schools for the purchase of materials and the Division of Extension and Support services should also be given adequate fund during the budgeting Session so as to meet many of her educational services to schools.

5.3.2 The Division of Extension and Support Services of the Ministry of Education, Sokoto State should be over-hauled to reflect the objectives for its establishment that is to say - educational services to all institutions in Sokoto State.

5.3.3 The researcher also recommends that the department of Resources and Educational Media in conjunction with the Arts and Graphic Section of the Division of Extension and

support services of the Ministry of Education, Sokoto State should utilise the available materials and equipment in the production of simple and local instructional materials and aids for use in institutions in Sokoto State.

5.3.4 Effort should be made to establish zonal resource Centres at each of the nine zonal educational offices where low-cost instructional aids could be produced for schools within the zone. The zonal resource centres should be equiped with personnel who among other things should be charged with the production of teaching Aids, workshops, seminars on educational issues and the maintainance of materials and equipment. Such workshops and seminars should emphasise on:-

(i) Media and Educational Technology
(ii) Equipment Operation/Maintanance
(iii) Visual production
(iv) Audio Production

The Ministry of Education should make it compulsory that all Principals of institutions ensure that their staff attend such relevant courses.

5.3.5 The National Education Technology, Kaduna organises workshops and seminars on media and Technology in Education. It is therefore recommended that the Ministry of Education, Sokoto State and Institutions of higher learning should acquint themselves with the course calendar and necessary steps should be taken to send teachers; personnel and technicians to attend such courses and workshops. For the year 1984, the course calendar is as follows:-

(i) Video Tape Production:- 19th March - April 27th 1984

Course objective

- to select and operate available instructional hardware
- to plan and design a learning experience and to select appropriate media as an effective and efficient system.
- To select, operate and maintain video equipment.
- To produce and test video-based learning package.

(ii) Audio Vidual Aids Technician Course. 7th May - 20th May, 1984

Course contents:-

- Audio Tape recorders, microphones, mixer.
- Audio recording mixing and editing
- Language laboratories.
- Operational Control
- Video recording, mixing and editing
- Projectors, screen and theatre location
- Organisation of Resources
- Still and Cine film cameras, lights, darkroom equipments and processing.

(iii) Projectionist Course. (Eight weeks)

Course contents

- Basic electricity
- Tape recorders, microphones, and sound recording,
- Reprographic techniques.
- Cine Van and School Visits

(iv) Media and Technology in Teacher Education.

30th July - 24th August, 1984

Course contents:

- Media characteristics
- Theories of teaching and learning
- Analysis of Instructional needs and the role of media and technology in meeting this needs.
- Structured learning/individualised learning
- Media production
- Management of Resources.

(v) Production of Instructional and Communication Software

Course contents:

- Visual literacy and cultural background.
- Theories of learning, information processing and the role of visuals
- 3 - D materials
- A comparison of Graphics for the different media-film, TV, slide etc.

With these broad course outlines, the researcher recommends that at least two personnel or teachers should be nominated by the Ministry of Education, Sokoto State for each course every year. It is also recommended that the National Educational Technology Centre, Kaduna should distribute her programmes for the year to all Ministries of Education in Nigeria.

5.3.6 Schools and Colleges should be encouraged to keep a miniature resourde centres where low cost teaching Aids could be

produced.

At its annual meeting held at Lagos in June,1984, the J..C.C. Reference Committee on Educational Technology proposed to the Federal Military Govt that the year 1985 should be declared the year of Educational technology. The aim of the declaration among other things is:

(i) To create awareness and improve understanding on the role of educational technology in the Nigerian Educational system.

(ii) To promote and encourage creativity amongst teachers and students.

(iii) To bring out the importance of improvisation in teaching.

(iv) To encourage the mass production of their educational materials and equipment that are found to be useful.

Towards achieving this objective, Festivals on the local production and use of educational materials and equipment is arranged to take place at the local government levels, State levels and the National level in all states in Nigeria. The Festival among other participants will include the state Ministry of Education, Educational institutions etc.

The researcher therefore recommends that the Sokoto State Ministry of Education should encourage all institutions, primary and post-primary to create a miniature resource centres for the production of teaching Aids; and the Division of Extension and Support Services of the Ministry of Education should also intensify on such activities as workshops, seminars on the production and use of Instructional materials.

5.3.7 The National Educational Technology Centre, Kaduna produces

and transmits educational programmes. It is necessary that schools are sent copies of such education programmes so that Principals can make provision on the school time-table for stud nts to listen to such programmes.

In the light of this recommendation, the Ministry of Education should provide institutions with good transistor radio and Television sets to listen and view such educational programmes.

5.3.8 It is also recommended that Principals of Institutions should embark on acquisition of materials through loan from NETC Kaduna, the British Council, Institute of Education Zaria etc.

3.9 The researcher also recommends that purchase of materials and equipment should be based on principles guiding selection criteria. This is very important inview of the cost involved and the purpose for which the material or equipment is meant for.

3.10 The purchase of these materials and equipment is not enough without necessary maintainance and spare-parts.

It is therefore recommended that the maintainance section of the Division of Extension and Support Services of the Ministry of Education, Sokoto State is staff with qualified personnel ... technicians to maintain and repair all materials and equipment purchased for educational purpose in schools.

3.11 Lack of Electricity explains why few schools with the projected materials could not use them. Effort should be made provide these institutions with a stand-by generator and a techni. to operate it.

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Availability And Utilization Of Print And Non - Print Instructional Materials In Technical And Vocational Schools Of The Ministry Of Science And Technical Education. (Sokoto - State.)

Questionnaire for School Principals.

Instructions:-

a. The questions that follow are intended to obtain facts regarding the existence and use of instructional materials in Technical and Vocational Schools only.

b. Please be as frank and objective as possible in answering the questions.

c. All responses will be treated in strict confidence.

SECTION B.

1) Name of School ----------

2) Type of School (pls ' ' tick)
   (a) Secondary Technical----------
   (b) Vocational Training Centre ----------

3) Date Established ----------

4) Students Enrolment as per 1983/84 session. ----------
   ----

5) Teaching staff strength as per 1983/84 session-------
   ----

6) Location of School (pls. tick ' '
   (a) Urban ----------
   (b) Semi-Urban ----------
   (c) Rural ----------

7) List the various courses and related subjects (except English and Maths that are found common to all courses) that are being offered in your school.

a) COurse ----------
   Subjects (a)----------(b)----------
   (c)----------(d)----------
   (e)----------(f)----------

(b) Course ----------
   (a)----------(b)----------
   (c)----------(d)----------

(e)----------(f)----------

c) Course----------

Subjects (a)----------(b)----------

(c)----------(d)----------

(e)----------(f)----------

d) Course ----------

Subjects (a)----------(b)----------

(c)----------(d)----------

(e)----------(f)----------

e) Course ----------

Subjects (a)----------(b)----------

(c)----------(d)----------

(e)----------(f)----------

SECTION B (Personal Information.)

8) Educational qualification (pls. tick ' ' the appropriate ones)

(a) N.C.E. ----------

(b) OND/HND ----------

(c) B.A./B.Sc./B.Ed./others ----------

(d) M.A./M.Sc/M.Ed. ----------

(e) Ph.D/Ed.D ----------

(f) others ----------

By instructional materials; we mean audio-visual materials such as films, still pictures, audio and video tapes, mod transparencies, maps, Television and Radio programmes, charts etc.

9) How much training in the use of instructional materials did you have in your pre-service and in-service (pls. tick ' ' as appropriate).

a) Took some courses as Elective ----------

b) Design of Instructional materials a major course--

---

c) Specialised in the design of Instructional materials

---

d) Acquire experience at work-shop ----------

e) Others - please state them ----------

---

10) For how long have you been in the teaching field? (pls. - tick ' ')

a) 1 - 3 yrs.--------
b) 4 - 7 yrs.--------
c) 8 - 10 yrs.-------
d) Above 10 years----

SECTION C: SCHOOLS ALLOCATION FOR THE PURCHASE OF INSTRUCTIONAL MATERIALS.

Print-materials refer to suchthings as text-books, magazines, journals, News-papers, etc; While Non-print materials refer to such things as slide-sets, film, filmstrips, video and audio cassettess/tapes, model etc.

11) How much is this year's financial budget for the purchase of Instructional materials for your school.

PRINT- MATERIALS (Pls. tick)

a) Below ₦3,000.00
b) ₦3,000.00 - ₦5,000.00
(c) ₦6,000.00 - ₦9,000.00
d) ₦10,000.00 - ₦13,000,00
e) ₦14,000.00 - ₦17,000.00

12) In view of your experience and bearing in mind the population of your school how do you describe this amount for the purchase of Print Instructional materials.(pls. tick ' ' as appropriate)

a) Too little
b) Little
c) Adequate
d) Too much
e) Don't know.

13) How much is this year's financial budget for the purchase of Non-Print Instructional materials for your School? (pls. tick ' ')

NON-PRINT MATERIALS

a) Below ₦3,000.00
b) ₦3,000.00 - ₦5,000.00
c) ₦6,000.00 - ₦9,000.00
d) ₦10,000.00 - ₦13,000.00
e) ₦14,000.00 - ₦17,000.00

14) In view of your experience and bearing in mind the population of your school, how do you describe this amount for the purchase of Non-print Instructional materials for your school? (Pls. tick ' ')

a) Too - Little
b) Little
c) Adequate
d) Too - much
e) Don't know.

15) What other ways(or sources) of acquiring instructional materials do you have for your school? (tick ' ') appropriate.

a) The Ministry of Science & Technical Education ---------
b) Independent body ----------
b) Name such a body ----------
d) Parents of students ----------
d) Others ----------

16. Has your school a Library Service? (tick) ' '

Yes ----------
No ----------

17. SECTION D: INSTRUCTIONAL MATERIALS·AVAILABILITY

a) The following are the categories of Print and non-print Instructional Materials that are found necessary and essential for effective teaching and learning.

b) Indicate by tick ' ' for YES or NO or whether the following Instructional Materials are available in your school.

c) Indicate quantity of such available materials by writing NUMBER or (Enough, Not Enough for text-books only.)

18) AVAILABILITY AND QUANTITY

Materials	Availability (tick) YES	NO	Quantity Number, enough not enoggh.
Text Books			
Flat Pictures			
Graphic Materials			
Diagrams			
Posters			

Materials	Availability (tick) YES	NO	Quantity Number, enough not enough.
Cartonns			
M Maps			
Bulletin Boards			
Charts			
Photographs			
Captions			
Flannel-graphs			
Globes			
Newspapers/Periodicals			
Slide - sets			
Video Cassettes/tapes			
Audio- Cassettes			
Overhead Transparencies			
Models			
Objects			

19) How much of these materials are produced locally Tick ' ' the appropriate column (locally,here means within Nigeria.)

Materials	Majority	Few	None
Text-Books			
Flat-Pictures			
Graphic-materials			
Diagrams			
Posters			
Cartoons			
Maps			
Bulletin Boards			
Charts			
Photographs			
Captions			
Flannel - graphs			
Globes			

Materials	Majority	Few	None
News-paper/Periodicals			
Slide-sets			
Film (16mm, 8mm)			
Film - strips			
Video/Cassettes			
Audio, tapes/Cassettes			
Overhead Transparencies			
Models			
Objects			

(20) Where are these Instructional materials stored?
Check the appropriate one/ones by ticking ' '

	Prints	Non-Prints
(a) In the School Library	----------	----------
(b) In the store or A - V centre	----------	----------
(c) In care of staff members	----------	----------
(d) In the principals office	----------	----------
(e) In care of H.O.D	----------	----------

(21) How often are the available Instructional materials used.
(Check the appropriate column and tick ' '

PRINT-MATERIALS:-

a) Always ----------
b) Sometimes --------
c) Rarely ----------
d) Never ----------

NON-PRINT MATERIALS:-

a) Always ----------
b) Sometimes --------
c) Rarely ----------
d) Never ----------

(22) The following are reasons why Instruction materials are not regularly used in our Institutions. Check the appropriate column and tick ' ' if applicable to your school

Reasons	Instructional Materials	
	PRINTS	NON-PRINTS
a) No Trained Teacher to operate them		
b) Lack of fund to buy spare parts		
c) Lack of Electricity		
d) Teacher has no interest in using them		
e) Teacher do not know the function		
f) Lack of co-operation between teacher and Principal		
g) Teacher cannot make it		
h) Lack of spare parts to replace damaged parts		
i) Lack of materials to improvise		
j) Insecurity of materials		

AVAILABILITY AND UTILIZATION OF PRINT AND NON-PRINT INSTRUCTIONAL MATERIALS IN TECHNICAL AND VOCATIO--NAL SCHOOLS OF THE MINISTRY OF SCIENCE AND TECHNICAL EDUCATION, SOKOTO STATE

Questionnaire for Heads of Department and Teachers

Instructions:-

(a) The questions that follow are intended to obtain facts regarding the existence and use of Instructional Materials in Technical and Vocational Schools only.

(b) Please be as frank and objective as possible in answering the questions.

(c) All responses will be treated in strict confidence.

SECTION 'A' (PERSONAL INFORMATION)

(1) Name of School:.....

(2) Educational Qualifications (pls. underline the appropriate ones).

(a) N.C.E.
(b) OND/HND
(c) B.A./ B.SC./B.ED./Others.
(d) M.A./ M.Sc./ M.Ed.
(e) Ph.D./ Ed. D.
(f) Others.

By Instructional Materials, we mean Audio-Visual Materials such as films, still pictures, audio and Video tapes, Models, transparencies, Television and Radio programmes, Maps, Charts, etc.

(3) How much training in the use of Instructional Materials did you have in your pre-service? (pls. tick as appropriate.)

(a) Took some courses as elective?.....
(b) Design of Instructional materials as a major course .....
(c) Specialised in the design of Instructional Materials .....

(d) Acquire experience at work-shop.----------
(e) Others. Please state them. ----------

----

(4) Where did you obtain your educational qualification?
(pls. tick ' ')

(a (a) In Nigeria ----------
(b) Outside Nigeria ----------
(b ii) State the country. ---------

(5) For how long have you been in the teaching field?
(pls. tick ' ')
(a) 1 - 3 yrs.
(b) 4 - 7 yrs.
(c) 8 - 10 yrs
(d) above 10 years.

SECTION B. Instructional-Materials (Availability)

Instructional materials comprise of Print and Non - Print materials. Print materials refer to such things as books, magazines, journals, News papers, periodicals, charts, maps, flat-pitctures etc.

Nor -Print materials refer to such things as slide-sets; film (16mm, 8mm etc); video and audio tapes, cassettes, models, objects etc.

The following are the categories of instructional-materials that are found necessary and essential for effective-teaching and learning.

Indicate by tick ' ' for YES or NO whether such materials are available in your department or school.

Indicate quantity of such materials by writing numbers OR(Enough; Not enough for text-books,) for use in your dept. and lessons.

AVAILABILITY AND UTILITY

6. Materials	Availability(tick)		Quanitity Number	
	YES	NO	enough	not enough
(a) Text-Books				
(b) Flat-Pictures				
(c) Graphic materials				
(d) Diagrams				
(e) Posters				
(f) Cartoons				
(g) Maps				
(h) Bulletin Board				
(i) Charts				
(j) Photographs				
(k) Captions				
(l) Flannel-graphs				
(m) Globes				
(n) News-papers periodicals				
(o) Slide - Sets				
(p) Film (16mm, 8mm,)				
(q) Models				
(r) Film-strips				
(s) Video-Cassettes				
(t) Audio-tapes/ cassettes				
(u) Overhead Transparan-cies				
(v) Objects				

(7) How much of these materials are produced locally?

(7) How much of these materials are produced locally? Tick( ) the appropriate column. (Locally, means within Nigeria.)

Materials	Majority	Few	None
(a) Text-Books			
(b) Flat-Pictures			
(c) Graphic materials			
(d) Diagrams			
(e) Posters			
(f) Cartoons			
(g) Maps			
(h) Bulletin Board			
(i) Charts			
(j) Photographs			
(k) Captions			
(l) Flannel-graphs			
(m) Globes			
(n) News-papers/periodicals			
(o) Slide-sets			
(p) Film(16mm, 8mm)			
(q) Film strips			
(r) Models			
(s) Video-cassettes			
(t) Audio tapes/Cassettes			
(u) Overhead Transparencies			
(v) Objects			

(8) For the materials available for your use, where are they stored? Check the appropriate one/ones and tick.

	PRINTS	NON-PRINTS
(a) In the school library		
(b) In the store or A-V Centre		
(c) In care of staff-members using them		
(d) In care of the H.O.D.		
(e) In the Principal's office		

(9) Are the instructional materials available for your use in the classroom. (tick ' ' as appropriate)

(a) YES----------

(b) NO---------- (Go to question 12)

(10) How often are they available for your use in the classroom? (check the appropriate column and tick ' '

PRINT MATERIALS:-

(a) Always----------

(b) Sometimes---------

(c) Rarely----------

(d) Never----------

NONE-PRINT MATERIALS:-

(a) Always----------

(b) Sometimes---------

(c) Rarely----------

(d) Never----------

(11) How do your students react to such instruction materials during your teaching and learning process. (tick) ' '

(a) Find the lesson very interesting----------

(b) Find the lesson dull ----------

(c) Do not understand the lesson ----------

(d) Helps to facilitate their understanding of the lesson being taught ----------

(e) See them as means of wasting time ----------

(f) Any others - please state them.

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12. The following are reasons why instructional materials are not regularly used in the classroom. Check the appropriate column and tick ' ' if applicable to your department, subject.

Reasons	Instructional materials	
	PRINTS	NONE-PRINTS
(A) No trained teachers to operate them		
(b) Lack of fund to buy spare parts		

Reasons	Instructional Materials PRINTS	NONE-PRINTS
(a) Lack of Electricity		
(d) Teacher has no interest in using them		
(e) Teachers do not know the function		
(f) Lack of co-operation between principal and teacher using them		
(g) Lack of spare-parts to replace damaged parts		
(h) Teachers cannot make them		
(i) Lack of materials to improvise		

(13) How often do you use each of the following instructional materials? Tick ' ' appropriate column after each one

Instructional Materials	Always	frequently	Sometimes	Rarely	Never
(a) Text-Books					
(b) Flat-Pictures					
(c) Graphic-materials					
(d) Diagrams					
(e) Posters					
(f) Cartoons					
(g) Bulletin Boards					
(h) Maps					
(i) Charts					
(j) Photographs					
(k) Captions					
(l) Flannel-graphs					
(m) Globes					
(n) News-papers/periodicals					
(o) Slide-sets					
(p) Films (16mm, 8mm, 32mm)					
(q) Films strips					
(r) Video-cassettes					
(s) Audio-tapes/cassettes					
(t) Overhead Transparencies					

Instructional Materials	Always	Frequentlly	Sometimes	Rarely	Never
(u) Models					
(v) Objects					