ASSESSMENT OF THE AVAILABILITY AND UTILIZATION Of IMPROVISED INSTRUCTIONAL MEDIA IN SELECTED SECONDARY SCHOOLS IN ZONE I GIWA DIVISION, KADUNA STATE

BY

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DECLARATION

I hereby declare that this thesis entitled ' ASSESSMENT OF THE AVAILABILITY AND UTILIZATION OF IMPROVISED INSTRUCTIONAL MEDIA IN SELECTED SECONDARY SCHOOLS IN ZONE 1, GIWA DIVISION, KADUNA STATE' is a product of my personal research efforts and that no part of this thesis was previously presented for another degree or diploma at any University. The information derived from the literature has been dully acknowledged in the text and a list of references provided in accordance with the rules of project presentation.

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CERTIFICATION

This THESIS entitled ' Assessment of the availability and utilization of improvised instructional media in selected secondary schools in zone I Giwa Division, Kaduna State' by Shehu Mohammed meets the regulations governing the award of Master Degree in Education [Instructional Technology], in the Department of Education, Ahmadu Bello University, Zaria and is approved for its contribution to Knowledge and educational development.

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DEDICATION

This 'thesis' is affectionately dedicated to Allah, the Almighty, the Creator, whose power gave me the strength to undertake this research up to the conclusion, and to my late father, Danjume Abubakar, for his moral, and physical support during the M. ed. programme. May his soul rest in peace, Amin.

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ABSTRACT

The study was set up to assess, ‘’the Availability and Utilization of improvised instructional media in selected secondary schools in zone I Giwa zone of Kaduna state. Research questions were designed to assess the significant impediment affecting the utilization of media in teaching-learning process. The population consists of ten secondary schools. Samples of 364 teachers were drawn from a total of 7000 teachers of the 26 secondary schools in the zone using Kcreije and Morgan sampling procedure. Cluster sampling technique was employed to ensure equal representation of variables. Questionnaire was used as the main instrument in gathering the required information for analytical purposes. Statistical package for social sciences (S.P.S.S. version 10.0) was used to analyze the data. The analysis of the data is based on the objectives of the study, and the research questions, thus 99% of the total respondents agreed on the usefulness of instructional materials in the teaching and learning process. Finally, it is recommended that the use of instructional materials in Secondary Schools should be encouraged as it aids teaching and learning.

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Instructional Materials improvised in the schools

	Improvised materials.	yes (√)	no (√)	total
1	Charts	√		26(7.14)
2	Drawings			
3	Diagrams			
4	Exhibits			
5	Graphs			
6	Maps			
7	Pictures	√		14(3.84)
8	Flashcards			
9	Globes			
10	Others			

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Education is a major tool for individual empowerment and National development. A National educational system is vital because it produces the personnel that are required to function in various facets of national life and development process. Gray, (2001) noted that "the goals of wealth creation, employment, generation, poverty reduction and value reorientation can be effectively pursued, attained and sustained only through an efficient, relevant and functional education system."

Education is a fundamental human rights enshrined in all United Nations and the need to provide quality education among youth and the need to provide them with necessary skills for increased economic productivity has been of great concern world – wide, (Peter, 2005, p- 7). According to Taneja, (2004), "Education is the deliberate and systematic influence exerted by the matured person on the immature through instruction and discipline". The essential elements in the educative process are a creative mind, a well integrated, self, socially useful purpose and experiences related to the interest, need and abilities of the individual as a participant in social living.

The main concern of education is to direct the undeveloped capacity, attitudes, interest, urges and the need of the young people into the most desirable channels. Children are born with instinct that needs to be properly directed in order to satisfy their social needs. Investment in the education of youth is considered as most vital by all modern Nation,[taneja,2004], 'further more the root meaning of education is given as making manifest the inherent potentialities in a pupil". Adesina,(1985) Noted that "Education is the tool for the integration of the individual effectively into a society so that the individual can achieve self-relation, develop national consciousness, promote unity and strive for social, economic, political, scientific, cultural and technological process". While Horton, cited in Akinpelu (1984) sees education as an enabling agency by which the Africans could restore their self confidence and make those who doubted the humanity of Africans begins to revise their views and learn to respect Africans".

Education has been accorded a high rating in most African countries, and the demand for education is popular because of the desire of common men and women to give their children a better chance in life. Thus the demand for education has become explosive and one which no government can afford to ignore. But the common problem bedeviling education in Africa is the problem of relevance and the unemployment of the educated.

Education in Africa has reached a cross-road that demand a change in direction, a change in our understanding and acceptance of what educational standard and quality are, the high demand of education in Nigeria give rise to the expansion of education.

Educational adjustment of the child is conditioned by the nature and

demands of society to which the child should be adopted and attained. The most distinctive feature of modern society is its science – base technology. Most African countries are faced with the problem of "knowledge explosion" which in one way or the other leads to "education explosion". To obliterate this problem, there is the need for more teachers and technology education. Technology education is being developed with the aim of improving the quality of education. Thus, the Nigerian National Policy on Education (2004, revised) states that "The Government recognizes education as an instrument per excellence for effecting national development.

As it is one of oldest and probably most respected professions playing an important role in the preservation of societies, teaching is a series of observables action which can be reviewed, enhanced, changed, and repeated for effective learning achievement. Teaching is a form of public service which requires of teacher's expert knowledge and skills, acquired and maintained through rigorous study- - - -UNESCO and the ILO (1984:6) quoted in Baikie (2002). This definition of the teaching-learning process shows that the act of teaching is full of activities that a teacher must engage in for any successful implementation of teaching learning process.

The teachers' role in the learning process is changing as new technologies are introduced into the classroom, (smith, 1999). The increased awareness of the role of teachers makes the development of teacher education programme an important component of an education industry (UNESCO, 2005). The quality of teaching is a crucial factor in promoting effective learning in schools. Effective teaching requires individuals who are academically able and care about the wellbeing of children. In every instructional setting; a teacher may be confronted by students with varied learning abilities, and topics that require many hours of preparation, and a limited amount of resources. Sherlock,(2000) stated that "an effective teacher must possess the skills of a detective in an instructional setting; to overcome such obstacles, a teacher must use observation, knowledge and skills to create instructional treatment that go beyond simple memorization of facts to create new level of understanding within the learners.

The information explosion has forged a new dynamic role for the teacher to engage fully in creative thinking. Creating a learning environment where constructing and sharing knowledge, skills and understanding is valued and a goal that every teacher must strive to reach. Therefore, the use of appropriate instructional materials is a ticket to success in the classroom.

Today, the world is changing rapidly; teachers must venture on their own creative thinking in building a life-long mastery with technology. Teachers must develop their potential ability to defeat the accompanying challenges. The need for new techniques in teaching and learning will continue to grow stronger and faster. Postman, (1996) Stress that ''with the aid of technology, many teachers can take students beyond the classroom limit, by creating virtual environment to experience''.

Therefore, teachers must search for creative ways to surpass technological imitations in order to challenge student's mind. Also Ragan, (1993).stress that ''teachers, need to think of creative methods, to use technology that enhance the learning process''. This can be done by facilitating the learning climate of instructional environment.

The term '' media'' refers to anything that carries information from the source to the receiver. Robert, (1996) stated that, Media are called Instructional media when they carry messages with instructional purposes to facilitate communication. Studies on the use of instructional media in teaching have been carried out by several investigators such as Irvin, (1982), Agun, (1986). Akambi, (1988), in Adeyanju (2003), they all pointed out the need for the development of skills by teachers so that they could be able to use a wide variety of materials in teaching sufficiently well.

According to Michael (1996), the effective use of media in teaching/learning process demands that teachers be better organized in advance and evaluates broadly to determine the impact of instruction on mental abilities. Ughamadu (1981) stated that ''educational media are the wide variety of instructional materials which brings about effectiveness and efficiency in the teaching-learning processes as well as enhancing the attainment of instructional objectives''. Basely, (1991) points out that "Educational media are objects and devices that have been systematically designed, produced and evaluated in which an instructor initiates and transfer encoded information by analyzing and interpreting such information with the intention of facilitating teaching-learning. Media are used in teaching to gain attention, help pupils to recall information, helps pupils to bring the world into the classroom for closer study. Harts (2000) points out that, ''media are used in teaching and learning process to support various activities among pupils''. Students learn effectively when such learning experiences and activities are illustrated with instructional media.

In his own view, Babatunde (2005), points out that, educational media in teaching help to engage learner's motivation, recall earlier learning, activate learner's response, give speedy feedback and encourage appropriate practice. Educational media store lessons that can be matched to the learner' characteristics: contents objectives, instructional approach and evaluation techniques as well as principles of learning. Instructional media are essential aid to effective instruction but are not commonly found in contemporary schools in Nigeria due to:

- **High cost of production**
- **Faulty development of curriculum – rushed coverage of syllabus.**
- **Teachers reluctant to spend their time, effort and money on improvisation.**

1.2 Statement of the problems

Nigeria is faced with series of educational challenges. One important area of the challenges is lack of availability and utilization of instructional materials in the post –primary school level to cope up with the modern technological challenges. UNICEF, in its state of the world children report for 1999 pointed out that, about four (4) million Nigerian children have no access to basic education and the majority of those that are lucky to enter school are not given sustained education (Akharie, 1999).

According to the World Bank Report (2003), the quality of education in most developing countries is low, coverage is insufficient, literacy level is low and the education system is very rigid. However, there are a lot of challenges facing this level of education in Nigeria today, especially in the area of teacher quality, materials production and utilization. Improving quality in education requires adequate resources, competent teachers, appropriate facilities, materials and methods which are lacking, hence the problems in the study area.

Thus, the major challenge for the educational system in contemporary Nigeria is the lack of qualified teachers to teach at various levels of the education system in sufficient number. This challenge of qualified teachers has adverse effects on the availability and utilization of equipment and materials for teaching at all levels, which also has affected the quality of the products of the educational institution, teachers included.

The scarcity of educational materials in secondary schools is a problem to students learning process. Students do not learn at the same space (UNESCO, 2004).The poor quality or lacks of instructional materials for different levels of learning increase the teacher's difficulties in teaching (UNESCO, 1999). UNICEF, in its state of the world children report for 1999 pointed out that, about four (4) million Nigerian children have no access to basic education and the majority of those that are lucky to enter school are given sustained education (Akharie, 1999).

Jibril, [2006] was of the view that ineffective method of teaching coupled with absence of instructional materials were some of the factors responsible for students inability to adhere to the desired behavioural changes in the teaching and learning process''. Traditionally, in the schools system today, instructional materials might not be available or the skills of using them is missing among the teachers, in such cases, looking for an alternative might be the best way to get them to solve the additional problems in the schools'.

The poor quality and uneven development and utilization of instructional materials for different levels of learning increase the teachers' difficulties in teaching. (Baikie, 2002) Despite the effort made so far to achieve these objectives by the government, there is the issue of "Falling standard" of education which manifested in students poor performance in

public examinations. The lack of adequately trained and qualified teacher's right from primary school system to secondary schools level have resulted in the children being ill—educated and ill—prepared to secondary schools, (Baikie, 2002). This has affected every Sector of Nigerian education system.

The issue is more apparent at the Secondary school level with the broadened curriculum brought about by the 6.3.3.4.System of education. Ivowi, [1984] stated that "this poor state of affairs may not be unconnected with extreme shortage of or inadequate teaching materials, high students' population and lack of knowledge and skills as well as lack of utilization of instructional materials in most of the public secondary schools". These necessitated the need for an innovative approach to improve the quality of instruction in secondary schools education nation wide.

The most significant force for change in recent years is the technological sophistication we now possess that affects our lives in profound ways and also increased our efficiency in education [kinder, 1973].The technological invention has bestowed upon education proliferation of materials which can assist in the reorganization and redefinition of educational experiences.

Traditionally, teaching-learning process is depended entirely on verbal communication, while the world is changing rapidly; students too are learning facts, skills, and values from pictures, television and other Media on their own. The need for new technology in teaching is drawing closer despite its dawning and teacher's misgiving about its potentials. Once technology enters the classroom, dramatic renovations usually begin. The knowledge of instructional design and development can provide teachers with instructional models to help them understand major concepts, ideas, and theories in education to assist in the delivery and evaluation of Instruction (Dick & Carey 1996).

The absence of technology in the classroom would continue to make a significant difference to the educational process. The school for long has been the sole medium for impacting information, and aiding in the acquisition of knowledge, but with the technological development and fast expanding knowledge, new avenues of education might come up. The instructional media disseminate information, knowledge, and skills which the school can no longer ignore but needs to be integrated into the teaching - learning process.

The importance of resource centre in the school system as stated in chapter five (5) of the Educational Blue Print (1989) is meant for classification, storage, development and utilization of instructional materials for teachers of secondary schools nation wide. Ofoefuna, (1992) stated that "a resources centre is central pool to learning materials, personnel, equipment and facilities for the production of materials to promote and enrich teaching and learning in schools". Educational resource center is conceived as a central teaching, training, research and service unit through which a variety of media resources can be harnessed to identify and solve

educational problems. The function of the center is to acquire produce and distribute different kinds of educational materials to schools for the enhancement of quality instruction. The center is established as an integrated approach for raising the quality of education through a better and more coordinated use of various resources. The increasing need for educational media resources in Nigerian secondary schools is in response to the challenges posed by the numerous problems associated with increases in student's enrolment shortest of qualified teachers and media in most of the schools.

1.4 Objectives of the study:

The objectives of this research are:

1. **To ascertain the availability of instructional materials in secondary schools**
2. **To assess the utilization of instructional materials by teachers in the teaching---learning process**
3. **To identify the efforts made by teachers in producing self instructional materials for teaching.**
4. **To ascertain the effect of instructional materials in enhancing learning in schools**
5. **To ascertain the impediments to the use of instructional materials in secondary schools**

1.3 Research Questions

The following research questions were formulated in order to obtain answer to the problems under investigation:

1. **Are ready made instructional materials available in the selected schools?**
2. **Do teachers make use of available instructional materials in their**

teaching?

3. **Do teachers improvise any instructional materials?**

4. **Do improvised materials have any impact on teaching?**

5. **What are the impediments to the use of instructional materials in the selected schools?**

1.5 Significance of the Study

The need to undertake this study was to investigate the conditions of secondary schools in Zone I Giwa Division, in respect of the availability and utilization of improvised instructional materials. The suggestions that will be effected from the findings may be of great benefit to the teachers if properly utilized. The findings from this study shall provide relevant information as regards to the skills of producing and utilizing locally made instructional materials to the classroom teachers for effective teaching-learning process. The research is also a documentary evidence of what is available and the deficiencies, at present in terms of teaching materials in most of post-primary schools. Finally, the study makes recommendations on the types of local instructional materials suitable for teachers to utilize effectively in the teaching and learning process.

1.6 Scope and Delimitation of the study.

The study assessed the availability and utilization of teacher-made instructional materials in teaching-learning process in selected secondary schools in Zone I Giwa Division. An in-depth research of all the secondary schools in the state cannot be conducted due to financial constrain, instead a few secondary schools were selected in the zone for the study. The study was delimited to all secondary schools in the zone – G. S. S. Jama'a, G. S .S Kwangila, G. S .S Basawa, G.G.S.S Samaru, G.S.S.Bomo, G.S.S.Hunkuyi, G.S.S.Kudan, G.S.S.Yakawada, G.S.S.Shika, and G.G. S. S. Giwa.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviews the issues regarding the utilization of instructional media in teaching – learning process for effective and efficient learning among secondary schools learners. The chapter focuses on the review of related literature under the followings;

2.1.1 Problems of the availability of materials in the schools

2.1.2 Utilization of the materials by the teachers

2.1.3 Problems of lack of knowledge and skills of utilizing and improvising instructional materials by teachers

2.1.4 Other things militating against the use of the materials by teachers

2.1.5 The importance of in-service training in the use of the materials

2.1.6 What is Improvisation?

- **a. Purpose of improvisation**
- **b. Rationale for improvisation**
- **c. Types of improvisation**
- **d. importance of improvisation**

2.1.7 Things that could be used in improvising instructional materials

2.1.8 Importance things required for improvisation of materials: time, knowledge, skills etc.

2.2 Problems of the Availability of the Materials in Schools

Education is a human right and the main instrument of delivering such education is the school. Rousseau, (2006) stressed that 'Schooling is a system within a society that teaches students to learn the knowledge needed to become functional members of the society as adults''. Schooling is a process by which students gain knowledge through modalities of teaching, management of environment and the use of specific practices that allows for the best learning experiences.

The purpose of the school is to prepare the young for future responsibilities in life by means of acquisition of an organized body of knowledge and skills which comprehend the materials of instruction (Dewey, 1938 P-18). The importance of education in connection with school pupils is the leading role it can play in promoting education for sustainable development, and to links the importance and meaning of sustainable development to everyday living.

Secondary schools are the focus of more learning opportunities in the

education system. Pupils benefits from an in-depth knowledge and skills of particular issues, whilst teachers benefit from exploring a subjects in a new and different ways (method), using variety of instructional media in the teaching-learning process which allows pupils to place their learning into a relevant context and can open up their eyes to the messages about sustainability of knowledge and skills gained to National development, (kids and kids 1996).

Media utilization in Nigeria secondary schools tends to lack coherence and widely accepted course sequences that allow teachers and students to build on prior knowledge.

Education is one of the most important single instruments of change in any society, and the main instrument of delivering such education is the school. The school has been recognized as an enduring human institution. Changes in schools, in most cases have been on physical structure rather than of the condition of teachers and their pupils. Secondary education aims at preparing individuals for useful living within the society and for higher education. The major causes of inadequate use of instructional materials in secondary schools can be summarized as:

a) High enrollment rates, inadequate facilities and materials as well as irrelevant curriculum.

b) Teachers not properly trained in terms of material development and utilization.

c) Poor access to materials to most secondary schools teachers in both urban and rural areas.

d) Poor environment to store and maintained such material for future uses.

Russet & Gaunter-Dourness, (1991) stated that ''developing new materials for teaching-learning process by teachers is time consuming and costly, but much more effective to learning and the resulting products serve as tangible evidence of teacher's own skills and knowledge''.

The National Policy on Education (NPE, 2004) specified the aims of secondary education as:

a) Equip students to live effectively in the modern age of science and technology.

b) Inspire students with a desire for national achievement and self- reliance.

The success of any system of education depends to a large extent on the availability and quality of teaching materials properly utilized by a resourceful teacher. The availability and utilization of instructional materials at lower levels will help to enhance the quality of inputs into the higher level and consequently impact positively on the outputs of the higher levels.

Lack of instructional materials for different levels of learning increases the teacher's difficulties in teaching (UNESCO, 1999). Teachers are regarded as implementers of curriculum and they also determine the quality in the school. The National Policy on Education equally recognizes the significance of teachers in the educational system (Ogunlade, 2005).

The primary concern of all teachers is to teach students. Teachers owe students their best efforts in providing meaningful learning through the new method of teaching – that is the use of different types of media in teaching. A serious problems being faced for a long time is that of achieving educational sustainability and lack of sufficient fund to produce and distribute quality materials in sufficient quantity in schools.

The lack of available instructional materials in post-primary schools in Nigeria is a serious problem despite the fact that the rapid change in technology and the new techniques of instruction have made it necessary for schools to be adequately equipped with different types of media, (Abdullahi, 2010). The production of learning materials in support of curriculum depends largely on government policy. The government promises of the availability of the materials are still very inadequate.

The availability and accessibility of instructional materials in many post-primary schools will surely predict the use of materials, (Abdullahi, 2010). The availability of learning material has long been recognized as an important factor in educational attainment. Educational achievement is determined by the teachers' knowledge of the subject and pedagogical skills, the availability of learning materials as well as time spent by pupils in learning, UNESCO 2000.

The poor quality or uneven development of instructional materials in learning increases the teacher's difficulties in teaching. Abdullahi, (2009) pointed out that "The only materials provided to the secondary school teachers are dilapilated chalkboard very old fashion episcopes, gramophones, attend charts and maps". Onyejemezi and Assuzu, (1985) in Abdullahi, (1995) indicated that "There was real death of instructional materials in secondary schools''. They pointed out that the availability of instructional materials in post – primary schools were inadequate, and that was what caused low levels of resources utilizations in secondary schools". Also Assuzu in Abdullahi (2000), found out that "The range of 'yes' scores on availability is between 4% and 5% for equipment and between 8% and 27% for materials, and the most available materials were photographs".

Also a study by Bello, (1988) revealed that most of the schools studied had only the common materials like pictures, diagrammes, charts, and some models with only one secondary school was found to having a motion projector, a T.V set and tape – recorder. A research study by Abdullahi, (1995) shows that the availability of instructional media in schools was very discouraging about 70% of the schools lack the projection equipment not to talk of overhead projector being the commonest of all projectors.

2.3 Utilization of materials by the teachers

One of the significant concerns of all teachers is that of dealing with students having varying abilities and backgrounds. These types of students require special opportunities to utilize their sensory organs in learning

effectively. Teachers owe their students best efforts in providing meaningful learning experiences by adopting the new methods of teaching which emphasize the use of different types of media in teaching.

Abdullahi, (2010) states that, when effectively used in teaching – learning process, media make different concepts clear to students, and help them to gain knowledge best through experiences. The utilization of whatever learning materials available and utility depend on the ability of the teachers. Teachers need to provide opportunities for learners to demonstrate their newly acquired knowledge and skills. This can enable learners to learn more and effectively, among different types of learning environment. It is astonishing that these variables are lacking among teachers in the study area.

Due to the constantly changing and increasing demands of modern ways of teaching – learning, there is a greater need for a progressive change and redesign of teaching learning environment and spaces, (Beethan 2007). Research studies shows that most teachers in Nigeria are not making use of any resource materials in the teaching-learning process. Resistance to the use of any materials in teaching might not be unconnected with the negative attitudes of teachers or lack of skills in the design and utilization of media in teaching. While innovative use of media suited for a particular purpose can help to fulfill the need for improvement in learning, there is an associated imperative to view media in light of proven practices and models of teaching.

The traditional methods of teaching have taken the minds of teachers away from the modern methods of teaching. The conservative attitudes of teachers towards the use of instructional media led to the difficulty of modifying traditional method of teaching to modern ones. According to Abdullahi, (2010) teachers tend to regard instructional media with deep suspicion thereby regarding education as personal relationship between the teacher and learners. It has been observed that the problem of work load gives teachers little opportunity to prepare adequately for the proper utilization of media in teaching. The utilization of available learning materials increases the degree of success in teaching. Teachers should be made to realize that improvisation and use of the local materials within the environment is an immensely valuable learning experience both for teachers and the learners.

The next generation of youths shall need knowledge and skills for which today's curriculum only form a foundation, to lay this foundation is a problem to be ascertained. Anticipating the education needs of future youths is further complicated by the need to incorporate what is different from classical approaches to the discipline with modern instructional materials, methods and content.

It was premised upon the preceding problems that the research-was undertaken. Teacher's focus is always on the improvement of the process of teaching and learning with commitment to the research in the field. Students

need to be empowered by teachers in the learning activities through the improvement of instructional materials. Teaching and learning can be improved by effective use of instructional-materials. The effectiveness of any instructional materials lies in its ability to focus the attention of the learners. Teachers facilitate students learning often in school with the use of available resources within the environment.

In the words of Kinder (1959) "a variety of teaching materials used in proper balance produced best learning results". Research showed that, intellectual process involves perpetual and conceptual teaching which the words of mouth alone cannot easily stimulate learners to learning activity effectively. Instructional media are useful in making instruction more effective and meaningful to the learners. With the aid of media, teachers can take their students beyond classroom limits by allowing them to explore and learn by discovery. The use of technology in teaching can change the way teachers teach, and the way learners perceive knowledge. Thus, teachers need to think of creative, result-producing methods to use instructional media that enhance the learning process of the teaming population.

In addition, instructional material development can provide teachers and students as well, with instructional models to help them understand major concepts, ideas and theories in education, (Dick and Carey, 1978). To build the foundation for more coherent curricular in technology, a pilot initiative would support the development of learning progression, (Curtly, 2005).

2.4 Problems of Lack of Knowledge and Skills of Utilizing and Improvising the Materials by Teachers.

The way teachers view the role of media in instruction will to a large extent determine the level and degree of its usage. Teacher's perception of media is predicted upon what they feel media can do in teaching – learning process. Many research studies have pointed out various external deterrents for the utilization of media. The major deterrent reported were lack of facilities and trained personnel (Higgins and Moseley, 2001). Other researches have noted that some teachers appeared to perceive media as threatening and perhaps in-human. lack of knowledge, skill and time are known obstacles to successful technology integration among teachers (Hardy, Arcle & Lam, 2000). Research shows that most teachers are either untrained or have had specialized training in fields other than in education. Thus, it is unfair to expect expertly designed and effective use of media from these categories of teacher.

Resistance to the use of materials in teaching stemmed from the negative attitudes, lack of expertise and training in media utilization, it is a fact that teachers are accustomed to traditional methods of teaching rather than the modern ones, (Abdullahi, 2000). The non-utilization of instructional materials in teaching is due to little confidence in the media effectiveness. The effort of the Federal Government in providing opportunities as indicated in the NPE

(FGN, 1998) asserted that:

a) Teachers education shall continue to take cognizance of changes in methodology and in the curriculum. Teachers shall be regularly exposed to innovations in the profession.

b) In-service training shall be developed as an integral part of continuing teacher education and shall also take care of all inadequacies. All these can be done through the inculcation and integration of the principles of instructional technology in teacher education programme.

Moor and Hunt, in Abdullahi (2000) suggested reasons for resistance in the use of instructional materials as: Many educators resist new teaching techniques and the use of instructional media based upon genuine concern, misunderstanding, misuse or unpleasant experience. On the other hand, teachers stick to their conservative attitudes towards instructional materials. Some are technologically illiterate. For technology adopted to be successful, teachers must be willing to change their role in the classroom (Hardy, 1998). Successful integration of technology into teaching depends on transforming teachers, belief and philosophy concurrently (Winchift & Sali, in Taiwo, 2009).

As a result of this, teachers should be concerned with the practice of educational technology, part of which involves improvisation. Before total success can be achieved in teacher education programme, teachers need to be acquainted with the available equipment and materials as well as conversant with the principles of improvisation for better result in teaching, (Taiwo, 1998).

2.5 Other factors Militating against the Use of Materials by Teachers.

Teachers must develop their potential ability to defeat the accompanying challenges. The need for new techniques in teaching and learning is necessary for learning to grow stronger and faster. Postman, (1996) Stress that ''with the aid of technology, many teachers can take students beyond the classroom limit, by creating virtual environment to experience".

Among the several factors militating against the production and utilization of instructional materials are teachers' lack of commitment to educational technology and skill of using the materials. The neglect of using any materials has to a large extent impeded effort of excellence in the educational system. Research findings indicate that Nigeria's technological backwardness is largely traceable to lack of the necessary technological base, this is evident more importantly on the neglect of instructional materials by teachers,(Nwachuku quoted in Abdullahi2010) observed that "a typical classroom is very conventional devoid of pictures and posters which have scientific impact, the result of which nothing can secure the imagination of learners and trigger discussion".

Teachers have been found to be reluctant in sacrificing their time, energy and money to purchase inexpensive materials. Lack of

resourcefulness and skills in the manipulation of media are an added problem, to producing materials by teachers. The information explosion has forged a new dynamic role for the teacher to engage fully in creative thinking. Creating a learning environment where constructing and sharing knowledge, skills and understanding is valued and a goal that every teacher must strive to reach.

Also, lack of adequately trained and qualified teacher's right from primary school system to secondary schools level have resulted in the children being ill—educated and ill—prepared to secondary schools, (Baikie, 2002). This has affected every sector of Nigerian education system. The issue is more apparent at the Secondary school level with the broadened curriculum brought about by the 6.3.3.4.system of education. Ivowi, [1984] stated that "this poor state of affairs may not be unconnected with extreme shortage of or inadequate teaching materials, high students' population and lack of knowledge and skills as well as lack of utilization of instructional materials in most of the public secondary schools". These necessitated the need for an innovative approach to improve the quality of instruction in secondary schools education nation wide.

Therefore, teachers must search for creative ways to surpass technological imitations in order to challenge student's mind. Also Ragan, (1993).stress that "teachers, need to think of creative methods, to use technology that enhance the learning process". This can be done by facilitating the learning climate of instructional environment.

2.6 The Importance of In-service Training in the Use of Materials.

There is the need for more and qualified teachers in our secondary schools. The need for qualified teachers is highly needed as the world is moving technologically fast. The need to raise the skills of the existing teachers, too, any of whom are unqualified is necessary. Beyond that the skills and knowledge teachers need are no longer fixed but moving. Teachers therefore, need more opportunities than ever before to go on learning through out their careers. Teacher's education programme failed to move in the direction of specialization. Although national policy pronouncement have continued to talk about the professionalization of teaching, this in practice can be possible only when there is specialization in teacher education, Nkom (2001).

The basic requirement of every teacher is that of sufficient qualification and confident in the subject area. To do all these, such a teacher must be well trained in teaching methods, and be aware of the needs and feelings of the students and the society as well. Teachers now face a widening range of demands and roles than ever before. The attention given to teacher education and their continuing professional development in many cases lagged behind at given to other parts of the education system, UNESCO. (2001).

The absence of in-service training programme has left teachers stagnant over lengthy periods. Teacher education and training is the programme of studies which leads to qualified teacher status according to the official standards of a country. The need to improve the quality of education in this situation requires a general retraining of teachers at all levels of education. The modern teachers need to be provided with new strategies for coping with varied learning situation (Nkom2000). The in-service training of teachers will help tremendously in improving the quality of teachers and eliminate the shortage of training and qualified teachers in secondary schools. The quality of teaching in secondary schools system will improved appreciably and the product of the schools would be better prepared for entry into higher institutions (Baikie, 2001).

There are at present large proportion of teachers already in service with relevant academic qualification that had no professional training in teaching. For proper preparation of teachers who are to operate at new professional level a new definition of institution for teacher training need to be provided. The new institutions must be deeply involved in research, experiment and be of innovative, and also encourage the practical application of such innovations.

The scrapping of the Teachers College has practically revealed the detrimental neglect of in-service training among teachers nation – wide (Nkom 2001). Teachers on training should be sensitized on the need to update their knowledge and skills for effective teaching. Teachers should design a self-evaluation form to assess the effectiveness of their teaching using instructional media periodically as applicable to the organization of the content of school syllabus at all levels.

The effort of the federal government in providing opportunity for any one who shows interest in teacher education is indicated in the National Policy on Education (FGN, 2004) that teacher education shall continue to take cognizance of changes in methodology and in curricular. Teachers shall be regularly exposed to innovation in the profession. In-service training shall be developed as an integral part of continuing teacher education and shall also take care of all adequacies.

2.7 What is Improvisation?

One of the goals of Nigeria educational system is the acquisition of appropriate skills, the development of mental, physical and social abilities and competencies as equipment for individual to live and contribute to the development of the society (Federal Government of Nigeria, 2004). The realization of this goal has been impeded by the non-availability of instructional materials in secondary schools for ensuring effective teaching – learning for better result among pupils. It has been reported that the non – availability of materials in schools serve as barrier to effective teaching, (Adeyemi, 1990; 2007), this leads to persistent poor performance of students in many subjects over the year.

Different scholars have defined the concept improvisation in different ways. Bajah in Eminah, (2009) defines it as the use of substitute equipment where the real one (ready – made) is not available. Also Kamoru and Umeono (2006), define it as the act of using materials obtainable from the local environment designed by the teacher to enhance instruction.

The term 'improvisation' simply means making of substitute from available materials when the real equipment are not available, (NERDC, 1987). Improvisation is the art of using local resources available within the school environment by a teacher to produce simple but attractive and effective instructional materials for teaching. Improvised materials contain ideas and photographs of the materials teachers usually prepare to promote the physical, social, emotional and cognitive growth of children. The materials are designed to encourage children to be curious and to take initiative by exploring and Interacting with other children. Young children learn best when their thoughts and experiences interact with materials, ideas, and people, such interaction gives learners meaningful developmental learning experiences, (Judy, 2004).

Improvisation is the practice of making and creating in response to the stimulus of one's immediate environment and inner feelings. This can result in the invention of new thought patterns, new practices, and/or new way to act. This invention cycle occurs mostly effectively when the practioner has a thorough intuitive and technical understanding of the necessary skills and concerns within the improvised domain.

The skill of improvisation is applicable to many different abilities of forms of communication and expression across all academic and non– academic discipline. Teaching – learning may not easily be achieved through the mere use of verbal words. As such improvisation becomes very necessary. The focus of teaching is on the natural reciprocating of comprehension and production in communication; on the functional and collaborative practice of language in flexible learning environment; and individual possession of skills. Children fin it easy and joyful learning a new language in a play – way method through imitation, chanting, singing, dancing, modeling, dramatizing, matching and going on excursion, (Federal Ministry of Education and Youth Development, 1993).

Balogun, (1982) stated that "an improvised piece of equipment is a substitute to the ready – made or factory type". The skill to improvise might include an effective use of locally – made materials, produced mostly by teachers instead of imported one. The ability to improvise needs professional commitment--creativity, technical skill, integrity and competence. Obanga,(1982) suggested that teachers need to think in order to improvise, as without some people engaging in hard thinking there can be no technology.

Teachers must be made to improvise materials such as microscope, cameras, water distilling apparatus, burners, measuring devises, charts and

electronic equipment. The teacher education programme must integrate materials development whereby teachers learn how to design and construct various materials and equipment which could be used for teaching – learning process.

These materials can expand and strengthen concepts, skills, memorization and attitudes of the pupils. The productions of teaching materials by a teacher that are original in concepts encourage pupils and teachers to be more creative, innovative and original than they are.

a. Purpose of Improvisation

Improvisation serves the following purposes in the teaching – learning process:

- **It ensure the realization of lesson objectives**
- **It gives room for a teacher to demonstrate his creative skills**
- **It gives room for the use of cheap local materials as alternatives to the ready – made ones;**
- **It enables teachers to think of better and faster methods of making teaching – learning process easier for learners;**
- **Afford students the opportunity of becoming on familiar with available resources in their environment.**

b. Rationale for Improvisation

Effective learning requires that concepts be exposed in a variety of contexts. This can not be possible without adequate and diverse teaching – learning materials utilized by a resourceful teacher (Adeyaju in Eminah 2009). Learners differ in several respects. The social and intellectual background of each learner is different (Coppen in Eminah, 2009). Hence not all the available materials meet the needs and interest of learners. Therefore improvising instructional materials is the logical action to take for balancing activities among the different categories of learners.

c. Types of Improvisation

Improvisation can be of three types namely Improvisation by Substitution, by Modification and by Construction. Eminah, (1996)

i. Improvisation by Substitution/Miscellaneous Materials.

A resourceful teacher denotes his time and ingenuity to producing materials best suited for learning purposes. Miscellaneous are locally available materials that are used just as they were collected without any alteration in shape or size. They include: Specimen, models, maps, as well as the use;

- **Dry cells in place of accumulators**
- **Wooden as pulleys**
- **Discarded bottles as reagent**
- **Plastic jerry cans as aspirators.**

ii. Improvisation by Modification/Duplicated Materials

With the aid of projection equipment, the teacher is able to produce cheaply, with limited time, materials that serve as desirable supplement to textual materials. These materials include Drawings, charts, pictures, graphs, etc. It also involves the conversion of:

- **A burette to a pinchcock (clip)**
- **A millimeter into a voltammeter.**

iii. Improvisation by Construction/Collected Materials

These are collected and compiled by the teacher to be used in the teaching learning activity, they include; pictures from Newspapers, magazines, and students work of good quality. It also involves the designing and construction of materials using low cost materials such as: -

- **Pinhole cameras**
- **Insect catching nets**

d. Importance of Improvisation

Improvisation of instructional materials is making the substances from available materials when the real equipment is not available, (NERDC, 1987). The use of media in teaching could extend the scope and power of instruction. It could also help to bridge the gap between the teacher and students in terms on understanding different concepts in the lesson, thereby making learning more immediate ands more relevant. To make teacher education programme more viable, there must be room for adoption of new principles and procedures in instructional technology that are necessary for growth in learning. This calls for more concern with improvisation of

materials through local initiatives.

According to Balogun (1982) Improvisation encourages creative expression and foster experimentation, sensitive to tactile and visual experience improves. Creativity in classroom environment communicates to children and teachers what is expected of them and what is happening in the classroom. A well-planned environment is inviting and interesting and conveys a message.

A resourceful teacher is one who, when faced with a problem considers a variety of solutions and chooses the most appropriate ones. In the absence of ready – made resources, a teacher improvises appropriate alternatives to, solve the problem. Teachers normally prepare local –materials in order to promote the physical, social, emotional and cognitive growth of young children. The materials are designed to encourage children to be curious and to take initiative by exploring and interacting with other children and adults. Young children learn when their thoughts and expectations interact with materials, ideas, and people; such interactions, according to Judy, (2004), ''gives children meaningful developmental learning experience''. Local materials give teacher/pupils the pride of using their talents, allows a teacher to reproduce his potentials, in concrete form and increase teacher's knowledge of the subject matter.

2.8 Things that could be used in improvising instructional materials

Holmes (2000) points out that ''the widespread recognition of the importance of local materials on teaching will encourage teachers to produce instructional materials for use in the teaching learning process''. According to Olaitan (1981), "Local materials are recommended because they are cheap and easily manipulated''. They save the teacher's time, simple to make and require little explanation by the teacher for students to understand them. When effectively utilized by the teacher, locally made materials help to stimulate student's interest, reduce the number of verbal responses and provide experiences not easily secured in other ways. Also, Holmes, (2000) Stated that "local materials are those resources found within the environment that are useful and effective if properly utilized by a resourceful teacher in the teaching learning activities''

2.9 Important things required for improvisation

In an attempt to improvise, a teacher must familiarize himself with what is in the syllabus, the variety of local material available within the environment relating to the topics and subjects handled.

The use of materials as instructional aids emphasizes innovation and change in method, over the traditional method of teaching. In order to aid in the implementation of new method, instructional media must be produced for effective teaching, (Taiwo, 2009).

Lack of instructional media in teaching – learning process can therefore be traced back to lack of initiative on the part of teachers. Improvisation needs commitment individual, judgment, self-direction and initiative. For media to be improvised and made use for teaching, a teacher has to be properly organized in terms of knowledge, skills of improvisation in order to allow for maximum utilization of potentials which will be revealed through such improvisation,(Ogunlade,2005). Teachers need to acquaint themselves with the available equipment and materials as well as conversant with the principles of improvisation for better result of teaching–learning process.

Media design and production takes a lot of commitment, which makes it mandatory for a resourceful teacher to carefully consider the followings: - Interest, time and skill of media design. Factors like the characteristics of learners, objectives of the study methodology and evaluation must be taken into consideration in the media design production and utilization, (Abdullahi, 2010). Research studies by Ross, Hogaboan, Gray, and Hamay in Taiwo, (2009) shows that access to technologies increased teachers "opportunities for successful teaching experience thereby contributing to greater confidence in their instructional ability". Teachers use media because they motivate students and offer different mode of presentation. More confidence teachers use media as instructional tools to enhance students learning (Lam, 2000).

Resistance to the use of media may arise from the negative attitudes of teachers, or lack of expertise and training in media utilization (Abdullahi, 2000).

For technology adoption to be successful, teachers must be willing to change their role in the classroom, (Hardy, 1998). According to Abdullahi, (2000) modifying traditional teaching methods will be very difficult as most teachers have conservative attitudes towards the use of instructional media in teaching. Also lack of fund, equipment and time are known obstacles to successful media integration in teaching, (Lam, 2000, Simons and Arck 1997).

The lack of fund to purchase and maintain instructional media also serves as a deterrent to the media utilization by secondary school teachers. Also the lack of proper funding for the purchase of media in the education sector, worsen every other efforts by both the educational planners and the teachers themselves in an effort to think for an innovative way of tackling the problems.

Thus, the report of the commission on the review of Higher Education in Nigeria (1991:123) comments "Education has suffered immensely from severe under funding particularly in the last 15 years. There has to be, therefore, a deliberate effort by the government and people of Nigeria to redress immediately with total commitment, dedication, and determination, the debilitating effects of underfunding through clear short term and long –

term policy initiatives". Teachers of nowadays are accustomed to the traditional methods of teaching thereby avoiding any new method of using instructional materials in teaching.

Wadi (2003) stated that, ''learning is enhanced when student can interact and perform authentic tascks'. A classroom is an opportunity to expose students to people who apply knowledge in practical context. The central mission of teaching is to support learning. Therefore, teachers should create classroom communities in which thinking and problem solving are supported by extensive interaction of students with media. The quality, speed and effectiveness of learning depend much upon the kind of learning situation and environment available to the learner. Learning is the product of activity and environment, the more the learner responds actively to the stimuli present in the learning environment the more he progress in terms of learning outcomes.

Kemp (1980) claimed that the human's senses are the perception mechanisms which enable people to know their external environment. The mind on the other hand is the cognitive mechanism that processes varied perceptions into specific concepts and understanding which are essential for the development of attitudes appreciation and the like. The uses of media in teaching learning process provide experience that is concrete and realistic. This implies that real and concrete experience leads to the development of understanding which in turn enables learners to solve their own problems. Torch and McLean, in Kemp (1980) summed up a research on perception as follows:

a. There is no purposive behavior without perceptions.

b. Behaviour is an outcome of the past perceptions and a starting point for future perception.

c. The perceiver and the world do not exist independently.

d. Meanings are given to things by the perceiver in terms of all prior experiences accumulated.

Kemp (1980) further stated that media design should be carefully provided for perceptual experiences, in terms of learners' past experience. Fostering pupils motivation towards learning is an essential features of the teaching skills involved in establishing a positive classroom climate, Hettich (1992). As education is a primary tool for the overall development of society, teacher education need to be very attractive professionally. The key to a successful learning group is for a teacher to engage his learners to spend sufficient time on task to ensure a mastery of knowledge, skills and attitude in the

curriculum.

According to Shah, (2007), for effective teaching-learning process, individuals who wish to become great teachers must be willing to sacrifice time and effort to reach their goal of solving instructional problems by integrating instructional technology into the classroom. A classroom is one of the facilities of learning in formal settings. The best classroom environment is one that results in efficient learning. Effective learning involves employing guidance and materials to encourage students to become self-directive thereby creating an atmosphere conducive to learning. Sound classroom control is achieved most efficiently if the teacher is equipped with a theoretical and working knowledge of the relevance principles and materials that undertake classroom behavior, (Caller, 1966).

The capacity of a child at a given time for learning schools subjects is subjects to methods of teaching and materials used by a resourceful teacher. The relevance of such materials to children's interests is a factor in readiness to learn. The next generation of our modern society will need knowledge and a skill for which today's curriculum only forms a foundation. Discovering and understandings that are on the forefront of today's research will be essential and fundamental parts of their world. Therefore, the success or failure in the task of learning in terms of introducing desired modification in the behaviour of the learner depends automatically upon the quality, control and management of the three learning elements and their related factors; methods, available resources, and environment, (Brijesh 2007).

2.10 Relevance of instructional materials in learning:

Learning, often defined as a change in the thinking process, resulting in the acquisition of knowledge and skills, is typically based on the teacher and student interaction with instructional materials, (mc Isaac, 1993). Also Gates, (2002) stated that "learning is a progressive change in behaviour which is associated with successive presentation of a situation and the repeated effort of the individual to react to it effectively". Learning is the development of new knowledge, skills or attitudes as an individual interacts with information and the environment, (Smaldino, 1996). Learning takes place effectively when such learning experiences and activities are illustrated with educational media. Studies in cognitive psychology and brain science have identified the following principles for effective learning:

- **Learning engages the entire physiology.**
- **Learning is influenced and organized by emotion and mind set based on expectancy.**
- **Human beings posses the need to make sense of the environment.**
- **Learning to do well involves practice in doing.**

- **Effective learning requires feed back.**

One of the principal characteristics of learning as enumerated by Simon, (2002) is that, learning is active that is, it does not take place without a useful and self activity of the learner. In the teaching—learning process, the activity of the learner counts more than that of the teacher. Teaching-learning process is a means whereby teachers try to improve the condition of life by training the mind in the modes of thinking and acting which will help to improve the condition of living that surround the learners. Learning is a process of bringing relatively enduring or permanent change in behaviour through experience or training, (Singh, 2007).

According to Murphy, (1968) "Learning can only be effective when the teacher takes into consideration of certain factors such as: interest, abilities, aptitudes and limitations of the learner''. The learning process is centered on three elements:

a. The learner whose behaviour is to be modified.
b. The type of experience and training required for modification.
C .The material resources needed for providing desired experience and training.

Crow & Crow (1999) stated that ''interest may refer to the motivation force that impels us to attend to a person, a thing or an activity''. Motivation is a reinforced, selective and goal directed behaviour initiated and energized by a motive which aim to maintain and balance equilibrium of the person in relation to his environment by keeping his basic needs in the process of satisfaction. Singh, (2007) stated that ''motivation is an essential requirement for the success of teaching---learning process''. Motivation in general sense is that which influence the arousal, selection, direction and maintenance of all human behaviour. Students requires some form of stimulus to activate, provide direction for, and encourage persistence in their study and learning efforts, {Groccia, 1992—p.62}. One of the principles of motivation is a proper organization and utilization of instructional material to suit the learner's interest.

Motivation is the very heart of the learning process. It energies and accelerates the behaviour of the learner. The intensity and motivation of the learner determines the effectiveness of his learning. Motivation is the process of arousing, sustaining and regulating activity". Teaching- learning process requires constant motivation from the teacher so that the optimum use of student's talent may be made for future development. Students require some form of stimulus to activate, provide direction for, and encourage persistence in their study and learning efforts, (Gloccia, 1992). Motivation can lead to improved learning outcomes by directing learners' behaviour toward particular learning goals and objectives and helping learners to be persistence in learning activities, Smith, (1999), also Galusha, (1997) in Crowley,(2004) were of the view that `` students' motivation is a

major factor that affects the attrition and completion rates in school subjects, and lack of motivation is also linked to high drop-out rates''. Kemp (1980) claimed that the human's senses are the perception mechanisms which enable people to know their external environment.

The uses of media in teaching learning process provide experience that is concrete and realistic. This implies that real and concrete experience leads to the development of understanding which in turn enables learners to solve their own problems. Torch and McLean, in Kemp (1980) summed up a research on perception as follows:

- **There is no purposive behavior without perceptions.**
- **Behaviour is an outcome of the past perceptions and a starting point for future perception.**
- **The perceiver and the world do not exist independently.**
- **Meanings are giving to things by the perceiver in terms of all prior experiences accumulated.**

Kemp (1980) further stated that media design should be carefully provided for perceptual experiences, in terms of learners' past experience. Fostering pupils motivation towards learning is an essential features of the teaching skills involved in establishing a positive classroom climate, Heinich (1996). As education is a primary tool for the overall development of society, teacher education need to be very attractive professionally.

The key to a successful learning group is for a teacher to engage his learners to spend sufficient time on task to ensure a mastery of knowledge, skills and attitude in the curriculum. According to Shah, (2007) in Harvey,(2003) for effective teaching-learning process, individuals who wish to become great teachers must be willing to sacrifice time and effort to reach their goal of solving instructional problems by integrating instructional technology into the classroom.

A classroom is one of the facilities of learning in formal settings. The best classroom environment is one that results in efficient learning. Effective learning involves employing guidance and materials to encourage students to become self-directive thereby creating an atmosphere conducive to learning. Sound classroom control is achieved most efficiently if the teacher is equipped with a theoretical and working knowledge of the relevance principles and materials that undertake classroom behavior, (caller, 1966).

The relevance of such materials to children's interests is a factor in readiness to learn. The next generation of our modern society will need knowledge and a skill for which today's curriculum only forms a foundation. Discovering and understandings that are on the forefront of today's research will be essential and fundamental part of their world.

Therefore, the success or failure in the task of learning in terms of introducing desired modification in the behaviour of the learner depends automatically upon the quality, control and management of the three learning elements and their related factors; methods, available resources,

and environment, (Brijesh 2007).

2.11 Summary:

This chapter reviewed the related literature on lack of availability and utilization of media in teaching-learning process by teachers as well as other things militating against the use of media in teaching. The importance of in-service training of teachers in the use of materials and the importance of improvisation as well as the things that could be used to improvise materials were also reviewed. The chapter also reviewed the local materials found and utilized by both teachers and students for effective classroom communication.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The study surveyed the effort of secondary school teachers in terms of availability and utilization of local instructional materials in teaching-learning process in some selected schools in Zone I Giwa Division, Kaduna State. The chapter also discussed the research design, population, sample size, and data of teacher-made instructional materials in the teaching-learning process, the availability and how instructional materials being utilized in the school enhanced teaching--learning.

3.2 Research Design

A research design is a plan that guides the researcher in conducting a study for collection of evidence that either supports or refutes claims about an educational phenomenon. The design of this study was a survey design, using a structured questionnaire. In this survey, samples were drawn using cluster sampling technique. This study examined a sample from a population conducted for the purpose of achieving the stated objectives of the study.

3.3 Population

The target populations for this study consist of teachers of secondary schools in Zone I Division. The population was three hundred and sixty four (364) teachers, male and female as shown below:

Table 3.4.1 List of Sampled schools and Teachers' population in Giwa Division

	Sample Schools	*Male*	*Female*	*Total*
1	***G. S.S. Basawa***	***30***	***12***	***42***
2	***G S S Bomo***	***30***	***14***	***44***
3	***G.G.S.S. Giwa***	***30***	***10***	***40***
4	***G.S.S. Hunkuyi***	***24***	***18***	***42***
5	***G.S.S. Jama a***	***15***	***09***	***24***
6	***G.S.S. Kudan***	***20***	***12***	***32***
7	***G.S.S. Kwangila***	***24***	***20***	***44***
8	***G.G.S.S. Samaru***	***20***	***12***	***32***
9	***G.S.S. Shika***	***25***	***15***	***40***
10	***G.S.S. Yakawada***	***14***	***10***	***24***

	TOTAL	232	132	364

3.4 Samples and Sampling Procedure

To determine the sample size of the schools for this study, a cluster sampling technique was used to select two schools from each geographical zone; Giwa inspectoral division has 26 secondary schools as at the time of this research study. Samples of 10 schools were taking from the 26 secondary schools at random and are arranged alphabetically.

3.5 Instrumentation

Data for the study were collected using two instruments:
Questionnaire – media perception evaluation scale
Observation _

Media perception evaluation scale (MPES): is a collection of 25 statements developed in the study about the media roles selected for this study the MPES has an introductory section where the following biographical information was demanded from each teacher: Whether teachers improvise media for teaching – learning process, types of improvised media utilized in the school, Number of years of teaching experience, Qualifications, and Gender.

Section "A" is based on Bio-data of the respondents.

Section "B" contained items on the availability of teaching materials. It was tagged AOIQ for the teachers and school administrators to respond to the items. The questions were based on their knowledge and experience in the secondary schools. It contained 10 items.

Section 'C' Contained 10 items based on the concept of utilization of the available instructional materials in teaching –learning process. It was tagged (UOATMQ) for the teachers to respond to them.

Section 'D'. This instrument was on a direct observation scheduled by the researcher. The need to observe physical available instructional materials and teacher –made materials called for this observation scheduled.

The 25 items developed were given to two experts, one in guidance and counselling and the other in educational technology. These experts were asked to indicate whether they agreed or disagreed with the classification of items under the media emphasis.

These items are matched with likert – scale having two categories **of responses ranging from Agree to disagree (See Appendix_)**

Table3.4.2 Distribution of Questionnaire by schools

S/N	*Sample Schools*	*No. Sent*	*No. Retrieved*	*missing*
1	***G. S.S. Basawa***	***42***	***39***	***3***
2	***G S S Bomo***	***44***	***43***	***1***
3	***G.G.S.S. Giwa***	***40***	***40***	***0***
4	***G.S.S. Hunkuyi***	***42***	***41***	***1***
5	***G.S.S. Jama a***	***24***	***24***	***0***
6	***G.S.S. Kudan***	***32***	***31***	***1***
7	***G.S.S. Kwangila***	***44***	***44***	***0***
8	***G.G.S.S. Samaru***	***32***	***32***	***0***
9	***G.S.S. Shika***	***40***	***40***	***0***
10	***G.S.S. Yakawada***	***24***	***22***	***2***
	Total	*364*	*357*	*08*

Table 3.4.2 shows that most of the respondents are located in Bomo, 44 (74.3%) ,Kwangila 44(10.1%),Hunkuyi,42 Basawa 42 , Giwa 40,Shika 40, Kudan 32, Samaru 32, while Jamaa 24, Yakawada 24. 62(60.2%) of total respondents teach as much as 20-40 students, 31(30.1%) teach within the range of 10-20 students while 10(9.7%) of respondents teach 40-60 students.

3.6 Validation of the Instrument

The media perception evaluation scales (MPES) was subjected to face and content validity by two experts, One from Guidance and counselling and other one from educational thing. Irrelevant items were deleted as a result of their suggestions. The final draft of the questionnaire was submitted to the major super visor for final comments.

3.7 Reliability of the Instrument

The spearmen – Brown formula of finding the reliability of an instrument was employed to the sample questionnaire. The coefficient of the split-half reliability of 92.5% was then obtained, thereby making the instrument good enough for the study.

To determine how reliable an instrument was, one of the research supervisors calculated the content of the instrument before implementation

was employed. Thus, the instrument was found highly reliable and administered to the sample population of 7,000 of the 26 secondary schools. A sample of 364 representatives of teachers in the 10 schools was selected. The scores were obtained and recorded as (92.5%)of the total respondents agreed on the use of instructional materials in teaching—learning process as reliable tool of enhancing learning among students of post primary schools level. This was assumed by the study to be a good reliability.

3.6 Administration of the Research Instrument for data collection

The administration of the questionnaire was as a personal effort of the research study and through the assistance of one of the teachers and principal. The sample variable of teachers was given the questionnaire to fill in and all efforts were made to collect back the questionnaire. All the sample schools were visited at different date to administer the questionnaire to teachers' .After completion; the questionnaire was collected immediately from each school for analysis.

In order to collect data, the following step-by-step procedure was taken:

a. The relevant teaching materials utilized in the school were identified.

b. The questionnaires were collected back after completion. They were sorted out as partial, non-respondent and wrongly filled.

c. The data from the questionnaire were analyzed, interpreted and recommended for effective use in the teaching-learning process for teachers in secondary schools.

Essentially, data from the research study requires descriptive analysis in the form of frequency counts, to be used for determining the trends of responses and the weight of materials needed expressed on the strength of the research questions posted for the study. Lack of such local materials in the schools, expressed an indicator of materials needed for effective teaching.

3.7 Procedure for Statistical Data Analysis

Data obtained from the questionnaire was used for the calculations necessary for analysis. Percentages and frequency were used to gather the opinions of teachers. The results from the calculations were determined, and related information derived. The detailed results of the study were reported in chapter four (4). It is with the results and with the information from the literatures review that the final conclusion was made along with the necessary recommendations. Two methods of analysis were used in dealing with the data from the questionnaire:

(a) Percentages – The percentage calculated enabled the researcher to study and describe items found or not found from the sample schools.

(b) Frequency – describe the number of respondents in the study.

CHAPTER FOUR
ANALYSIS OF DATA AND RESULTS

4.1 Introduction

This chapter present the analysis of the data collected from the sample used in the study. The chapter includes general discussion from the result of the data collected as supported by the theoretical framework on the research. The analysis of the data is based on the objectives of the study and the research questions. A total of two hundred and thirty two (232) out of three hundred and sixty four (364) teachers representing (63.74%) of the sample schools are male, while one hundred and thirty two (132) teachers representing (36.26%) are female.

TABLE 4.1.2 Teachers' Experience in teaching

Years of experience	*frequency*	*Percentage*
16year and above	***54***	***14.83%***
11 -16year	***152***	***41.75%***
6 - 10year	***88***	***24.17%***
0 - 5year	***70***	***19.23%***
Total	***364***	***99.98%***

Most of the respondents have been teaching at the secondary school level between 11--16- years with about a total of 152 respondents 41.75% fall within this category. 54 (14.83%) fall between 16—and above category, 88 (24.17%) are under 6--10years teaching experience, while 70 (19.23%) falls under below 5years.

TABLE 4.1.3 TEACHERS' QUALIFICATIONS

Qualifications of teachers per school	*Frequency*
MA/M.Sc./M.Ed.	***10***
BA/B.Sc./B.Ed.	***98***
OND/HND/DIP.	***14***
NCE	***102***
Others	***49***
Total	*364*

The above table shows those Respondents with NCE as minimum qualifications are the highest with a total of 102 (28.2%), B. Sc /B.A, B. Ed, have 98, OND/HND/DIP have 14 respectively, while MA. /B.Sc. /M.Ed. have 10(2.75 %) of the total respectively. The distribution of the respondents in the highlighted category showed that most respondents are male, and have N C E as their highest qualification.

Table 4.2.1 Research Question 1

Responses on whether there are Available materials in the sample schools

	Available Materials	Yes (√)	None (√)	%
1	**Charts**	✓ **76**		**20.88%**
2	**Drawing**			
3	**Diagrams**			
4	**Exhibits**			
5	**Graphs**			
6	**Maps**			
7	**Pictures**	✓ **24**		**6.59%**
8	**Flashcards**			
9	**Globes**			
10	**Others**			

The results in table 4.2.1 show that, chart as an improvised instructional material is the most available in Zone I Secondary Schools, Giwa Division of Kaduna State. Charts alone accounted for about 20.9% of available improvised instructional materials.

Table 4.2.2 Research Question 2

Utilization of available instructional materials in teaching-learning activity

Result from analysis as in table 4.2.7 above shows that a total of 342 (100%) teachers make use of available instructional materials in teaching, while 22% do not make use of any teaching materials in their teaching.

Table 4.2.3 Research Question 3

Impact of instructional materials in teaching—learning process

Category	*Yes*	*%*	*No*	*%*	*Average*	*%*
NCE	***46***	***12.64%***	***36***	***9.89%***	***30***	***8.24%***
BA/B,Sc/B.ed	***36***	***9.89%***	***28***	***7.69%***	***36***	***9.89%***
OND	***24***	***6.59%***	***24***	***6.59%***	***29***	***7.97%***
MA/M.Sc/M.ed	***26***	***7.14%***	***16***	***4.39%***	***33***	***9.06%***
Total	*132*		*104*		*128*	

Table [4.2.3] shows how Teachers rate the effectiveness of instructional materials in learning process.132 (93.8%) respondents agreed that instructional materials are very helpful in the learning process, a total of 104 respondents agreed as helpful, while 128 respondents agreed on average.

Table 4.2.4 Research Question 4

Improvisation of instructional materials by teachers

statements	*Number of Responses*	*%*
yes	***350***	***96.15%***
No	***14***	***3.84%***
total	*364*	*99.99%*

Table [4.2.4] above shows the result of the analysis of items 6--11 which cover the improvisation of materials in teaching-learning process, 350 [96.15%] of the total respondents agreed that instructional materials help Teachers to clarify objectives, help students to gain a lot of knowledge without frustration, help students to retain knowledge permanently, provide learners with common experience and facilitate modernization in the teaching-learning process. A total of 14[3.84%] respondents disagreed on the contributions of instructional materials in teaching-learning process.

Table 4.2.5 Research Question 5

Responses on the significant Impediments of material utilization in teaching

questions	*Yes*	*No*	*A %*	*B %*
16	*33*	*07*	*3.02%*	***1.92%***
17	*43*	*03*	*11.81*	
18	*20*	*01*	*5.49*	***0.82***
19	*38*	*06*	*10.44*	
20	*23*	*06*	*6.31*	***0.27***
21	*41*	*05*	*11.26*	
22	*35*	*04*	*9.61*	***1.64***
23	*34*	*06*	*9.34*	
24	*33*	*08*	*9.06*	***1.64***
25	*20*	*02*	*5.49*	
				1.37
				1.09
				1.64
				2.19
				0.54
TOTAL	320	44	87.91%	12.08%

Table (4.2.5) above shows the result of analysis of items 16 –25 which cover the impediment of not using instructional materials in teaching. 320 (87.91%) of the respondents agreed that teachers lack the skills of using instructional materials, as enumerated on numbers 16-25 of the questionnaire are some of the reasons of not utilizing materials in teaching. 44 [12.08%] disagreed with the outlined items as reasons for not using instructional materials in teaching.

4.3 Major Findings

The chapter shows that the analyses of data obtained from the respondents questionnaire. The bio data of the respondents were described using the table of percentages.

The analyses seek to find out the efforts of teachers on materials design and utilization in teaching—learning process. The analyses of data show that out of 364 respondents a total of 350 respondents do make their own teaching materials. While only 14 respondents do teach without using materials in teaching. Results of the analyzed data collected and discussion of the major findings are presented below:

Table 4.1.2 **Result shows a total number of 152 teachers who teach between 11 – 16 years are the highest with 41.75%. This indicates a degree of professionalism in terms of knowledge acquisition in teaching but not in**

skills acquisition.

Table 4.1.3 **Result shows that teachers with N .C .E qualification are the highest with a total of 102 (28.2%). This shows that teachers with N.C.E qualification dominate the teaching profession in the zone, but lack the essential of improvisation of materials.**
Table 4.2.1 **Result shows that chart appears to be the most available instructional media in the sample schools. This indicates that instructional media are lacking totally in most secondary schools.**
Table 4.2.2 **Result shows that a total of 342 out of 364 teachers of the sample schools make use of available materials in the teaching-learning process. This indicates that teachers have the zeal of modifying their old methods of teaching with new ones, but lack the knowledge and skills of improvisation.**
Table 4.2.3 **Result shows that a total 132 teachers rated the use of media teaching as; very helpful (132) helpful, (104) while 128 fall under average. This indicates that teachers are ready to incorporate any new method of teaching if given the opportunity to produce and utilize media for effective teaching – learning.**
Table 4.2.4 **Result shows that a total of 350 respondents/teachers agreed strongly on the importance of using media in teaching which accounted for about 99.99%. This show that if proper organized and supported. Secondary school teachers are ever – ready to utilize any media produce to schools for the development of education nationally.**
Table 4.2.5 Result shows that a total of 320 respondents agreed on the inability of some teachers to use instructional materials in teaching-learning process due to lack of knowledge and skills of utilizing media in teaching activities. This shows a total lack of media design and utilization in schools.

5.3 Discussion of Findings

The lack of teaching materials in secondary schools coupled with teachers' negligence in the use of local materials within the environment to improvise effective teaching materials contributed immensely in the poor performance of students in the National exterminations.

Nowadays, technology power changed the process of teaching–learning by providing more learning resources for effective learning. Technology provides teachers and students with more options to learn, to teach, to research, to communicate and to share knowledge and skills. Therefore, students need to be empowered in learning activities with multiple options of learning resources in order to meet the demand of global change in learning.

This research study and recommendations when effectively implemented by teachers and educators will in no small measure contribute in reducing the high level of failures in school subjects in most secondary schools nation wide. The knowledge and skills of instructional materials acquired by teachers through various means will lead teachers to a new trend of global change in knowledge and national development. The professional

development of teachers sits at the heart of successful design and utilization of instructional materials in the teaching-learning process. Teachers need not only formal training but the sustenance of on going support from the government to help them learn how best to integrate technology into the modern teaching –learning process.

In this globalization age, students need empowerment in their learning activities. They are in need of learning while doing with multiple options of learning materials. It is necessary to use all sources of local materials available within the environment to educate the children of today so as to ensure that they do not miss the train of global trend. Proactive measures should be taken by stakeholders for students to interact with instructional materials in order to effectively view the impact of globalization; central to the preparedness of any nation for globalization is a sharp focus on its children who own the future.

It is time to collectively change approach to teaching- learning process, and particularly take advantage of the influence of technology to improve learning outcomes, enhance social development, economic opportunity, foster greater creativity and realize the dreams of globalization.

The state educational resource centre should mount periodic seminars, and workshops session for in-service teachers on the use of instructional materials in the teaching-learning process. Teachers should be sensitized on the need to update their knowledge and skills for effective teaching.

The need to improve higher education should begin with growing greater attention to both primary and secondary schools. These areas are the building blocks of society's educational foundation. To support government efforts, Private sectors should assist in form of financial and materials donations. Also a national assessment of instructional materials should be mounted by N.T.I. for both primary and secondary schools nationwide for the effective achievement of Nigeria universal basic education (UBE) programme by the year 2015.

Finally, educational resources centre should assist secondary schools teachers with materials (improvised) which can further promote teacher's participation in creating new materials for teaching. A scholarly national assessment of instructional materials theory and practice is essential if Nigeria is to present a realistic account of its Universal Basic Education (UBE) achievement by the year 2015, when the assessment of education for all (EFA) goals will be considered for materials development and utilization if teaching learning process is to be relevant and meaningful. A baseline needs analysis is also required to assess current media levels and practices as well as social issues that have to be considered before any material is designed and developed for learning.

CHAPTER FIVE

Summary, Conclusions and Recommendations

5.1 Introduction

This chapter presents the summary of the study and findings. It also puts forth the conclusion made and some recommendations based on the findings of the study. It is hoped that the recommendations made in this study will be implemented. The aim of the study is to assess the availability and utilization of teacher –made instructional materials in secondary schools in zone 1 Giwa division, Kaduna State.

The aim of the study also is to generate research-based data from the opinion of teachers in the development of teaching-learning materials for effective learning.

5.2 Summary of the study

The study aimed at assessing the availability and utilization of improvised Instructional -materials. The study adopts the use of table of frequency and percentages to analyze the data. By means of 25 items on instrument for research, the study collects the views of three hundred and sixty four (364) teachers randomly selected in Giwa Division on the utilization of teacher-made materials in secondary schools.

The responses were analyzed statistically through the use of frequency and percentage. The results of the respondents favorably showed that there is a great need in the use of instructional materials in teaching—learning process.

Major findings drawn from the study shows that the most frequently used materials for teaching in the Secondary schools are charts. This accounted for about 20.9%. Also 99.9% of the total respondents agreed that instructional materials helps teachers to clarify objectives, help students to gain a lot of knowledge retain it permanently without frustration and a common experience that facilitate modernization in the teaching and learning process, while 13% disagreed on the contributions of materials in teaching – learning process.

The study found out that the use of instructional materials in the teaching-learning process is very effective and that it helps Teachers in clarifying objectives, while it helps the students to gain and retain knowledge permanently. It was also found that factors that hinder the use of instructional materials by teachers are lack of fund; interests as well as necessary skills on the part of teachers are also the major factors identified as preventing teachers from using Instructional materials

5.3 Implications.

The various findings of this study have implications for teachers in most secondary schools in terms of required skills development.
The study has shown that it is possible to develop skills in teachers in terms of materials production drawing opinions from professionals.

The study has its implication for teachers in secondary schools in the state as well as in Nigeria as a whole in terms of effectiveness, government support; funding, proper management and monitoring of equipment and materials should be given paramount consideration.
The study, if properly implemented is advantageous for mass awareness among teachers nationwide.

5.4 Recommendations

The following specific recommendations are premised on the findings of the study;

a. The use of instructional materials in secondary schools should be encouraged as it aids teaching and learning.

b. Teachers should be trained and re-trained through workshops, seminars and conferences for the purpose of skill acquisition necessary for the production and use of instructional materials by teachers.

c. As lack of interest or motivation was also identified as a cause of not providing instructional materials, teachers should be adequately motivated. This can be done by improving condition of service for teachers and better remuneration.

d. Necessary funds for the production or purchase (where necessary) of instructional material should be made available through the Educational Resource Center.

e. Training: there is a need to train teachers for skills competency in the design and utilization of locally-made materials for effective teaching and learning in schools to support national policy and programme on secondary schools throughout the country.

f. Funding: the greatest challenge facing secondary school education in Nigeria is inadequate funding by both Federal and State governments. If Nigeria is to attain part of the EFA millennium development goals, there is the need to come up with a reliable and generally work force materials development support by government as policies to ensuring accessibility of such materials and training skills to secondary school teachers.

5.5 Conclusions

Based on the findings of the study, the results of study points to the need for teacher's enlightenment on the importance of technology in the teaching-learning process to enable them acquire the appropriate techniques and skills necessary for this modern era, the basic skills requirement must first be tackled through workshops, and short service courses. This could be in form of part-time training for teachers.

5.6 Contribution to knowledge Advancement

The lack of teaching materials in secondary schools coupled with teachers' negligence in the use of local materials within the environment to improvise effective teaching materials contributed immensely in the poor performance of students in the National exterminations.

The purpose of using media in the teaching-learning process is to motivate

learners pay more attention in the learning activities so as to comprehend effectively in order to achieve the stated goal of the of the educational objectives.

This research study and recommendations when effectively implemented by teachers and educators will in no small measure contribute in reducing the high level of failures in school subjects in most secondary schools nation wide.

The knowledge and skills of instructional materials acquired by teachers through various means will lead teachers to a new trend of global change in knowledge and national Development.

5.7 Suggestions for further studies

The following suggestions are made for further studies:

- **This study can further be undertaken by other researchers in other secondary schools in Giwa Division that were not covered by this study.**
- **This study can be undertaking by other researchers in other inspectoral divisions within Kaduna State that was not part of this study.**
- **The results of this study should encourage the organization of seminars and workshops for in-Service teachers on the importance of instructional materials in the teaching—learning process.**
- **There is the need to replicate this study among other states of the country.**

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APPENDIX A

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(EDUCATIONAL TECHNOLOGY SECTION)
AHMADU BELLO UNIVERSITY, ZARIA

ASSESSMENT OF THE AVAILABILITY AND UTILIZATION OF IMPROVISED INSTRUCTIONAL MEDIA IN SELECTED SECONDARY SCHOOLS IN ZONE I GIWA DIVISION, KADUNA STATE.

TEACHERS' QUESTIONNAIRE

Dear Respondent,

This questionnaire is designed to investigate the availability and utilization of improvised Instructional media in Secondary schools. The purpose of the study is to help teachers in designing and producing appropriate materials for effective teaching – learning process.

You are please required to respond to the questions by ticking (√) most appropriate to you. Kindly respond to the questions objectively so as to enhance the quality of the research. I sincerely thank you in advance for your assistance.

Section [A]

1. Sex: Male ( ) Female ( )

2. Educational Qualification(s)
MA/M.SC/Ed. ( )
BA/B.SC/Ed. ( )
OND/HND/DIP ( )
N C E ( )

3. Teaching Experience: ( )
16-----20yrs ( )
11----15yrs ( )
6--- 10yr ( )
0 --- 5yr ( )

4 Number of pupils per class
70------80 ( )
60 -----70 ( )
50------60 ( )
40------50 ( )

5 Are ready—made instructional materials available in your school?

Yes ( ) no ( )

6 If not, do you improvise any instructional materials for your lesson?

Yes ( ) no ( )

7. If yes, which among the following do you normally improvise?

	Improvised Materials	Yes (√)	None (√)	Total
1	**Charts**	**76 √**		**20.88%**
2	**Drawing**			
3	**Diagrams**			
4	**Exhibits**			
5	**Graphs**			
6	**Maps**			
7	**Pictures**	**24 √**		**6.59%**
8	**Flashcards**			
9	**Globes**			
10	**Others**			

8 if not, who provide instructional materials for teaching in your school

Self ( )
School ( )
E R C ( )
N .G. O's ( )
None ( )

9 How often do you /they normally provide the materials?

Per term ( )
Quarterly ( )
Yearly ( )

10 Do you take your students out for an excursion, (Educational visit)?

Yes ( ) no ( )

11 How will you rate the learner's level of understanding and interest while using instructional materials in your lesson?

Very helpful ( ) Helpful ( ) Average ( )

UTILIZATION OF MATERIALS

12 Do you find it difficult to teach without the use of instructional materials? Yes ( ) no ( )

13 When using instructional materials in your lesson, do students show high interest? Yes ( ) no ( )

14 in the absence of instructional materials in your lesson, do you notice any difference from the students? Yes ( ) no ( )

15 are the differences in connection with the following:

S/N	REASONS FOR NOT USING INSTRUCTIONAL MATERIAL IN TEACHING	SA	A	U	D	SD
16	**Many teachers lack the skills of using them**					
17	**Instructional materials are too expensive to purchase.**					
18	**Teachers now rely mostly on textbooks as their teaching aids**					
19	**Generally, teachers negligent in the use of materials in teaching**					
20	**It is because E.R.C does not provide them to schools.**					
21	**Most of the materials present are absolute (outdated).**					
22	**Lack of support from the management.**					
23	**The use of materials in teaching is time consuming.**					
24	**Lack of facilities in the school to house the materials.**					
25	**Lack of electricity in the school.**					