PERCEPTION OF THE EDUCATIONAL ADMINISTRATORS AND

TEACHERS ABOUT PLANNING AND IMPLEMENTATION OF THE INTRODUCTORY TECHNOLOGY PROGRAMME IN KADUNA STATE

BY

DEBORAH LAMI ZAKARI

JUNE, 1998

THE INTRODUCTORY TECHNOLOGY PROGRAMME IN KADUNA STATE

BY

DEBORAH LAMI ZAKARI

A Thesis submitted to the postgraduate
School of Ahmadu 8eilo University Zana
In partial fulfilment for the requirement
for the Award of the Masters Degree in
Educational Administration and planning

DEPARTMENT OF EDUCATION
AHMADU BELLO UNIVERSITY

ZARIA- NIGERIA

JUNE 1998

DECLARATION

I hereby declare that this thesis has been written by me and that it is a record of my own original research work. It has not been presented anywhere in any form for the award of a higher degree.

All quotations are indicated by quotation marks and the source of information are acknowledged by means of references.

CERTIFICATION

This Thesis report title: Perceptions of Educational Administrators, and Teachers About Planning and Implementation of Introductory Technology Programme in Kaduna State by Deborah Lami Zakari Meets the regulations governing the award of the Masters Degree of Ahmadu Bello university, Zaria, and is approved for its contribution to knowledge and literary presentation.

Dr A. N. Ezenne | 28/7/98

Chairman, Supervisory Committee. | Date

Dr(Mrs) R. B. Ayamnuri | 28/7/98

Member, Supervisory Committee. | Date

H. S. Hinjari | 14/1/99

Member, Supervisory Committee. | Date

B. Dawa | 22.11.98

Head of Education. | Date

| 10/02/00

Dean, Postgraduate School | Date

DEDICATION

This thesis is dedicated to the Almighty God for His abundant Mercies, my family and all those who have prayed for me for the successful completion of this work.

ACKNOWLEDGEMENT

My sincere gratitude goes to the Almighty God for guiding and protecting me during my course in Ahmadu Bello University. I am indebted to Dr.A.N. EZENNE and Dr. (Mrs) R.B. AYANNIYI for supervising this work. Dr Alabi guided me up to field work and I am grateful to all of them for their valuable criticism, suggestions, and advice during the writing of this thesis.

I am also grateful to J.C.S Musaazi, Dr. M. Afolabi and Mrs. H.S. Hinjari for their useful suggestion during my course in Ahmadu Bello University . I sincerely thank Dr. O.A. Bamidele, Dr. Mamman Musa Dr. Tauna and Mrs. T.Andow for their assistance during the writing of this thesis. I am grateful to my employer for the opportunity giving me to improve my career.

I thank the Ministry of Education Officials Principals and the Teachers of Introductory Technology used for this study, and I am also grateful to my children for their patience and understanding during my course in A.B.U Zaria. I thank (HAMISU GOMA JIBRIN) for typing this final report.

DEBORAH LAMI ZAKARI

ABSTRACT

This study on the perceptions of the Educational Administrators, Principal and Teachers about the planning and implementations of the Introductory Technology programme was undertaken in order to find out the perception of the planners and the implementers of the programme in kaduna state. The various literature related to the problem were reviewed to provide framework for the study. Ministry of Education Officials, Principals and Teachers responded to the questionnaires. The opinions of these respondents were converted to raw scores, and frequency and percentage distributions were used to analyse the data collected. The Anova one way analysis test was also used to determine whether there were significant differences in the opinions of Educational Administrators, Principals and Teachers regarding the various aspect of the planning and the implementation of the Introductory Technology Programme in the junior secondary schools.

It was found that a significant difference exist in the opinion of Ministry of Education officials, principals and teachers on the issue of provision of adequate teaching and learning materials for the JSS introductory technology programme. Teachers and Principals pointed out that the materials supplied to the

school were not adequate while the Ministry of Education Officials argued that the supply was adequate, the respondents also disagreed on the issue of funding. Both teachers and principals said that adequate funds were not provided to the schools while the Ministry of Eduction Officials argued that enough funds were provided to the schools for the JSS introductory technology programme, on the three groups of respondent agreed that well qualified technical teachers were not available in the schools. On the planning and the implementation of the Junior secondary school programme, both principals and teachers stated that the planning and implementation of the programme are not good enough while the ministry of education officials argued that the planning and implementation are adequate.

It was recommended that the state government should develop other strategies for raising fund such as through endowments, education rates, levies *and* surcharge on profits from industries. More workshops and workrooms should be provided to the schools and well qualified technical teachers should be posted to the schools to teach the course. The JSS introductory technology programme is a very important programme and if well implemented would lead to faster development of science and technology, in the state.

DEFINITION OF TERMS

Ministry of Education Officials:- refer to the officers of t Ministry of Education and Principal responsible for planni and implementation of educational policies for juni secondary school in Kaduna State.

Technology::- refers to all processes that deal with changing material scientifically to satisfy the need of people within that society.

Technical Education:- refers to knowledge acquired as practical skill scientifically.

Craftsman:-Skilled workman who practices a craft.

Perception :-refer to the opinion which someone has about something. In this study, the perception of the *respondent about the planning and implementation of the* JSS introductory technology programme refer to the opinion of these respondents about the planning and implementation of the JSS introductory technology programme.

Planning:- Is a process of setting out in advance a pattern of action to bring about the achievement of a given objective.

plan Implementation :- refer to putting the decision reached and agreed upon into action and evaluating the actions to know whether the set objectives have been achieved.

Introductory Technology Programme:- Refer to Woodwork Metalwork,Electronics and Mechanics as listed in the 1981 National policy for Education.

Pre-vocational subjects:- As defined in the NPE include. Woodwork, Metalwork, Electronic, Mechanics,Local Crafts, Home Economics and Business Studies.

TABLE OF CONTENTS

Chapter 2

Chapter 3:

Chapter 4:-

CHAPTER 5

LIST OF TABLE

TABLE

CHAPTER ONE

1.0 THE PROBLEM

1.1 Introduction and Background to the Study:

This study is focused on the perceptions of the senior ministry of education officials, principals and teachers about the planning and implementing of junior secondary school programme in Kaduna State. many educators have argued that technology is the foundation for economic development of any country and technology facilities the acquisition of practical of practice skills and knowledge necessary for the economic development of the nation. One of the aims of technical education is to provide opportunities to young people to learn practical skills which will not only help them to be self- reliant but also enhance the economic development of the nation. Fafunwa (1985), pointed out that technical education is an important vehicle for vital and meaningful development in Nigeria.

The National policy on Education (1981) stated in clear terms that the junior secondary school will be both pre-vocational and academic and will teach all the basic subject which will enable students to acquire further knowledge and develop practical and technical skills. This policy on education stated the broad aims of secondary school education within the overall national objectives as ; to prepare the young people for useful living within the Nigerian society and to equip students live effectively in our modern age of science and technology.

It is a common knowledge that indigenous technologies have not developed fast enough and because of this, the junior secondary school programme was introduced to help in the development of local technologies which will not only make the young people self-reliant but will also help the economic development of the nation, as a whole. The federal government introduced the 6-3-3-4 system of education to encourage young people to pursue different courses of their interest and has laid a great emphasis on the training of young people in technological education. This attitude of the federal government was pointed out by Fafunwa (1974) when he observed that the government has been encouraging training in the field of technical education and this was not the case in the past, especial during the colonial era.

However, it is also observed that parents have not been encouraging their children to pursue technical education course because of the poor attitude of the people towards technical education. AJayi (1984) observed that parents did not allow or encourage their children to go to technical institutions or to study technical subjects in schools and this is because many parents have the belief that technical education programmes are for school dropouts and those who could not do well in grammar school education. In fact technical school graduates were discriminated against by the people until recently. Lewis (1965) noted that technical education was neglected in Nigeria for a long time and he attributed this to the biases of educational administrators and teachers who preferred general education to technical education. Similarly, the British colonial administrators not only paid little attention, but had no interest in the development of technical education in Nigeria.

This study is focused on the junior secondary school technical education programme which is an important level of the national 6-3-3-4 system of education introduced by the federal Government in September, 1982. According to the National policy on Education (1981) the federal Government of Nigeria planned that secondary should be of six year duration and should be given in two stages, junior secondary school stage and a senior secondary stage; each stage being of three years duration. The 6-3-3-4 system refers to the system of

three years followed by four years of undergraduates studies at University.

The study is interested in the planning and the implementation of the technically biased junior secondary school programme of the 6-3-3-4 system. It has been observed that in Kaduna state, the expenditure in education is very high when compared to expenditures in other sectors of the economy. According to (Ade - Ojo,1989) the budgets of 1986, 1989 ₦387,460. mated only introductory technology supports the viewd. The money was used to acquire infrastructure, the equipment and materials for the implementation of the junior secondary schools in the state. Lack of well trained technical teachers may be one of the factors that make school administrators to neglect the curriculum of junior secondary in Kaduna state.

The Kaduna state Ministry of Education recently has been emphasizing it's commitment to technical and vocational education programmes. In 1988 Governor mukhtar of Kaduna state stated in budget broadcast that the state government was committed to the development of science and technical education and he argued that it is the only way of achieving technological advancement in the state. In pursuance of this the Ministry of Education created planning and Research Division and the Science and Technical Board in the ministry to take charge of the planning, implementation and development of the technical education programmes in the state. At the present time, some of the junior secondary schools are now equipped with wood and metal machines equipment, aimed at the implementation of junior secondary school curriculum in the state. The federal Ministry of Education had also provided some consignments of technical equipment of the implementation of the junior secondary school programme in Kaduna State.

1.2 Statement of the Problem

With the introduction of the 6-3-3-4 system, many planning and implementation problem appeared. There was the problem of understanding the aims and objectives of the scheme by the educational planners and administrators serving at the various levels of education including the Ministry in Education itself. School principals and teachers in secondary schools were ill-equipped for the introduction of the scheme. They ware not sure about the objectives and the methods of implementation the introductory technology scheme at the junior secondary school level.

At the national and state levels, short term plans were made and a number of technical education equipment and materials were purchased and distributed to junior secondary schools throughout the countries. However many secondarv school teachers were not trained in technical education and therefore were not able to operate the imported machines and equipment sent to their school. Although teachers were sent for short courses but a good number of them did not return to Nigeria after their technical training abroad. All these problems helped compound the implementation of the junior secondary school introductory technology programme in the country. Other problems included the interpretation of the curriculum content, the recruitment of local skilled technicians to assist in the implementation of the junior secondary school programmes.

This research work is aimed at finding out the perception of the planners and the implementers of the junior secondary school technical education programme in the 6-3-3-4 system of education, with a view to offer some suggestion towards full and effective planning and implementation of the programmes so that the set objectives will be fully realised. The study will find out opinion of the respondents on the adequacy of the equipment, The workshop and laboratories available in the schools, funding of the programme, the teaching of introductory technology in the school, quality and quality of teachers and then general implementation of the junior secondary school programme in Kaduna State.

1.3 The Purpose of the Study:

The purpose of this study was to find out the opinion of the ministry of Education officials, principals, and Teachers of introductory technology about the technical education programme, the 6-3-3-4 system introduced in 1982. AS a result suggestions has been given concerning methods and ways of improving the planning of the educational policies, Since it is a continues process in order to achieve the set-objectives .Further suggestions has been stated also regarding the improvement of the teaching and learning exercise.

1.4 Research Questions:

The following research questions are put forward for this study in order to focus properly on the objectives of the study.

1. Is there a difference in the opinion of Teachers, principals and Ministry Officials about the planning of the junior secondary school introductory technology programmes in Kaduna State ?
2. Is there a difference in the opinion of Teachers, principals and Ministry Official about the provision of adequate workshops and workrooms for the junior secondary school introductory technology programmes in Kaduna State ?
3. Is there a difference in the opinions of Teachers, Principals and Ministry officials about the adequacy in the supply of teaching and learning materials for JSS introductory technology programmes in Kaduna State
4. Is there a deference in the opinion of Teachers, Principal and Ministry Officials about the funding of the junior secondary school Introductory technology programmes in Kaduna state ?
5. Is there a difference in the opinion of Teachers, Principals and Ministry Officials about the fact that junior secondary school Introductory technology programmes are not taught by well qualified technical teachers in Kaduna State ?

6. Is there a difference in the opinions of Teachers, Principals, and ministry Officials about the implementation of the junior secondary school Introductory technology programme in kaduna state ?

1.5 The Hypotheses:

The following hypotheses have been advanced for this study:

1. There is no significant difference in the opinions of Teachers, Principals and Ministry of Education Officials about the planning of the junior secondary school programmes.
2. There is no significant difference in the opinions of Teachers, Principals and Ministry officials about the provision of adequate workshops and workrooms for the junior secondary school programmes.
3. There is no significant difference in the opinion of Teachers, Principals and Ministry Officials about the adequacy in the supply of teaching and leaning materials the JSS introductory technology for programmes.
4. There is no significant difference in the opinion of Teachers, Principals and Ministry Officials abut the funding of the junior secondary school programmes.
5. There is no significant difference in the opinions of Teachers, Principals and Ministry of Education

Officials about the fact that junior secondary school programmes are not taught by well qualified technical teachers.

6. There is no significant difference in the opinion of Teachers,Principals and Ministry of Education Officials about the Implementation of the junior secondary school technical education programme.

1.6 Basic Assumptions:

The following basic assumption are made for this study:

1. It is assumed that the perceptions of the Ministry of Education Officials. Principals,and Teachers about the junior secondary school technical education programmes are valid for assessing the programme.
2. That the perceptions of ministry Officials, Principals and Teachers about the technical education scheme of the JSS introductory technology reflect the policy of the kaduna state government on the junior secondary school technical education programme.
3. That teachers are well qualified to teach the JSS programmes.
4. That teachers are well qualified to teach the JSS programmes effectively.
5. That the JSS introductory technology programme are well funded by the federal , State and local governments.
6. That the teachers are well motivated towards achieving

the objectives of the junior secondary school technical education programme.

It will help in assessing the availability of funds, facilities and equipments for the acquisition of technical skill through the programmes. The study will also help to assess the qualifications and experiences of the ministry of education officials and teachers in the planning and implementation of the junior secondary school technical education programmes.

1.7 Significance of the Study

This study is significant in the sense that the finding obtained on the opinions of teachers, Principals and Ministry of Education Official concerning the introductory technology programme of JSS on Kuduna has provided vital importation on

(a) The provision of adequate workshops and workrooms for the junior secondary school programmes .
(b) The adequacy in the supply of teaching and leaning materials for their programmes.
(c) The funding of the junior secondary school programmes
(d) The fact that junior secondary school programme are not taught by well qualified technical teachers
(e) The Planning of the junior secondary school programmes
(f) The implementation of the junior secondary school

technical education programme which will be useful to policy makers in the Ministry Education and create awareness among the member of the society on need to provide adequate workshops,workrooms , teaching and learning materials, funding, effective teaching and implementation of the junior secondary school programmes.

In particular, this study will be used o the state government by creating awareness for it to develop different strategies for financing the comprehensive secondary schools programmes in order for the schools to effectively implement the programmes.

The finding of this study will also be useful to the society in that they will create awareness about the problems of implementing the junior, school programmes by supporting the efforts of government,through various ways

1.8 Scope and Limitation of the Study

This study examines the opinions of ministry of education Officials principals and teachers on the planning and implementation, of the technical programme of the junior secondary school.

The study is however limited to kaduna state and to the junior secondary school Technical programme, the findings obtained in this study apply only to Kaduna state.

Areas not covered in this study include the opinions of un-certificated teachers who have the technical know- how skills but lack actual academic qualifications. But who could be positively utilised in the practical class especially the teachings of the local crafts and other pre- vocational subjects.

CHAPTER TWO

2.0 REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

In this chapter a review of related literature is presented under the following sub headings. The development of technical Education in Nigeria policy on Education in relation to technical education. Planning and implementation of the technical education in junior secondary schools. Studies related to Junior secondary school technical education and the summary of the chapter.

2.2 The Development of Technical Education in Nigeria

Historically, the development of western type of education in Nigeria as started by the missionaries and other voluntary agencies concentrated more on the classics or literary of type of education and made it a symbol of prestige Fafunwa (1979) Stated that, the policy makers and educators were literary men nd women who developed and maintained a system of education that promoted their interest. With that kind of orientation the Nigerian Public learnt that in order to get the needed prestige, privilege opportunity and, they had to get a degree in humanities and this became their target.

The slow start of technological type of education, therefore, was partly due to the cost and partly because they did not consider this type of education to be of any importance. Oloniyi, (1989) revealed that it was doubtful: whether a big trade centre or technical college was necessary then. Such a school, according to him would be very expensive to build and equip; it would require a large European and African staff strength and there would be great need for its products when trained (Ten Year Development plan of 1944)

This initial neglect or lack of encouragement by the authority concerned may be responsible for the negative attitude of the Nigerian people towards technical education over the past years. Also, this has led to the conclusion that technical education was inferior to literary type of education; and therefore, was not the pre-occupation of the intelligent man. As a result, only people who had no choice or who were drop-outs were attracted to those few schools. People understood such schools as being for those who can use their hands and not their brains. They did not see a relationship between the head and the hand.

The same opinion has been held by Olaitan(1986), who argued that the colonial system of education did not go unattacked, because of its lack of utility. The Phelp Stroke Commission (1922) point out that Nigeria are

There was a change in direction after independence when the government changed attitude in favour of technical education in its Ashby Report (1960) and the Third National Development Plan 1975 to 1980, where more emphasis was placed on technical education. Students were encouraged and also the government subsidised tuition fees to give students impetus to pursue technical education. UNESCO (1978), also reported that one of the major educational objectives of the Third National Development Plan was to reform general education by introducing technical and vocational aspects the into curriculum; thus incorporating introductory technological subjects into the Seventh to Nineth Year of Schooling.

Since then the federal and state governments have laudable plans for technical education. However, to successfully achieve the needed goal in science and technology education, the orientation must start from the primary school curriculum. It will enable the children to grow up with such orientation which will help them cope effectively in the latter years.

The problem with Nigeria as a nation is that educational programme are usually established without the support of research data (Fafunwa, 1985) came up with a tentative account that many educational administrators and teachers of introductory technology appear to be ignorant regarding the concept of technical education at the junior secondary school level. later,attempts have been made to source out the kind of introductory technology that should be adopted researchers like Mukerjee (1978)uche (1986) and Ogunbadejo (1989) contended that :

1) Technological education should be transfered.

2) Technological education should be adapted.

3) That technological education should be developed within Nigeria culture.

This point is stressed by Edem (1982) that there is a slow translation of research projects and products in this society. planners are always in a hurry to implement new programmes without adequate preparations and the result is usually a disaster. A good example is the Universal Primary Education (UPE) programme. There is always a wide gap between the policy maker and those responsible for the implementation. Good intentions of the government are hardly achieved. The issue at present is that the perception of Nigerians concerning technical education has to change in order to achieve a technological breakthrough which is vital for any meaningful development to take place.

The federal government created a separate Ministry for Science and Technology to handle matters relating to technical education. States were encouraged to set up boards of technical education to cater for their needs and comply with the federal government's directives. Thus, in order to achieve the desired objectives, Kaduna State Government created a separate Board of Technical Education in 1978. The Board is to deal with all issues concerning Science and technical education. However, it is answerable to the parent ministry of Education for all implementation and monetary affairs. Governor Mukhtar,(1989) declared that; despite dwindling nature of the purse the government would pursue vigorously the development of science and technical education.

Consequently, the Board of Directors and the Management staff were inaugurates in July, 1989 to take charge of six science based colleges including the only technical college in the state. They are:

(1) Kaduna Teachers College, Kaduna;

(2) Girl's Science school, Kwoi·

(3) Girl's Science School Soba

(4) Boy's Science Kafanchan, Wusasa;

(5) Boy's Science school, Ikara; and

(6) Girl's Science School Ikara.

Report from the state ministry of Education indicated that Science equipment were recently Purchased from different countries including Bulgaria, Hungary, Czechoslovakia. Soba boy's secondary school had science equipment which were imported from Britain and were more reliable. The new machines could not run for longer than eight hours otherwise they would burn off.Also, the spare parts were not readily found in the open market, they had to be important.

The state has spent the following amount in the last five years on technical education.

	Year	Amount
1.	1986	N745,378
2.	1987	N505,379
3.	1988	N415,026
4.	1989	N387,460
5.	1990	N506,020
6.	1991	N64,000

The budget in 1986 was because kaduna state had two technical colleges then, but with creation of katsina state, they had one each (Ade-Ojo, 1989).

There have been a few vocational centres that deals strictly with the dullard. the present set up, however., has established more of these science schools which will be upgraded to technical college in the end. So far, chawai technical college and Kujama technical College which used to be vocational centres have been converted into technical colleges. Their inception is not too far off as all their equipment, workshop, laboratories have been established. the administrative blocks, Student hotels and other infrastructure for conducive leaning have been contracted out. The argument of the State Educational Administrators as to why Kaduna state has only one technical college all along is that they desire to achieve a better and qualitative education. As to the efficiency of such outputs to serve the state and make meaningful impact, their answer is, it is not enough, that is why they are planning these other technical colleges.

Moreover, parents now struggle seriously to get their children into such schools. This means the government propaganda has gone a long way to enlighten the society as to the need and importance of getting skilled people in the society. The government in the meantime is facing societal pressure for more of such schools. The science and technical college conduct entrance examinations which students must take. Those finishing the Junior Secondary school III (JSS#) take examinations in the following subjects.:-English language; mathematics; Integrated Science; and Introductory Technology. Those who pass and are indigenes of Kaduna state are admitted - Sharing them equally the number according to the four educational Zones of the state.

One of the way the government advertised technical education and its importance to the individual, society and the country at large was the introduction of introductory technology in the Junior secondary school.

> Olorunselu (1989) stated The Federal Government's idea for introducing Introductory technology as a subject to be taught to all students in the JSS is with the hope that it will reduce the ignorance the public has about technical education and to make people aware of the apart the subject can play in the development of the nation.

Furthermore, Olurunselu (1989) believed that a positive perception by the society will have a powerful impact and will shape the ideal allocation of resources source in order of priority. Since technical education is an expensive programmes to operate, as such, only when these programme are financially supported by the Nigerian public can its goals and ideals or objectives be accomplished. Also, Mukerje (1978) feel that perception is best expressed when an individual makes statements about their feeling or opinions about certain subjects. One's awareness, and knowledge obtained directly or indirectly about things.

When the society perceive the importance of technical education, there will be more incentives for the society as a whole, and more especially for educational planners and implementers. Adesina (1977) is of the opinion that the education the society needs is practical experience.

In order, therefore, to ensure that the goals of technical education are achieved, it is imperative to set up an adequate administrative system. The existing system in the schools' management as at present is far below achieving positive results. Ocho (1976) observed that schools are too large and too unwieldy for effective control of teachers in such a way that their productivity is high.

It is a reality that (1986), to make technical manpower training very effective it involves huge investment. If real progress is to be made in proper training of crafts men, the government must be prepared to make necessary investment. The cost of training material is far much expensive than any other type of education.

Furthermore, the cost of staffing, erecting infrastructure facilities and equipment cannot be ignored. With the government being the sole financer of education, the question to be asked is whether the government will be able to provide adequate funding for technical and vocational education.

Some researchers are of the opinion that education is not a free enterprise, but must be financed by government, individuals or grant aides which may be directly or indirectly. such researchers are Ade-ojo (1989). contended that education in Nigeria has been financed through three source :-

(a) Grants in aid from the various aims of government;

(b) Collection of fees; and

(c) levies by cultural union or voluntary contributions by parents and guardians.

The government positive change of attitude towards technical education has helped . Financing technical institutions with the hope of providing better technical education in the country is also an impetus for further development. Professor Jibril Aminu, former Minister of Education, (1986) Stated that education is one of the consumptive sectors of the government funds, as it consumes about 20 % of the budget of the whole country. this may be considered as fair share, but when one considers the population of the schools and the students, it is obvious that the student, still suffer due to inadequate funds.

There is need, at the same time, to constantly review policies of education as instrument of change,since the society is dynamic not static. This will ensure its adequacy and continued relevance to national needs and objectives. Review of educational policy will also accelerate the perception off the Nigerian populace to reject the inherited ingrained respect for classical education and members of white coller hierarchy with committed contempt for technical education.

The federal government in changing this attitude towards technical education in 1966, during Gowon's regime, sent a team of Technical Education experts to visit Great Braitain, Sweden, Holland, and the United state of America, to study system of vocational and technical Education. This team was headed by Dr. Adams Shipaski from the Ford Foundations as its chairman. observations. reported by Chairman. In their observations, reported by Onabamiro (1983), Concluded,that curriculum of Nigeria's grammar school curriculum is unsatisfactory. shipaski (1983) team recommended that post primary education in Nigeria should be comprehensive. The course of study should cover not only academic subjects but should be wide enough to cater for the whole range of human abilities and attitude with special stress on pre- agricultural training including domestic science as well a spre-vocational and pre-technical training including commercial subjects.

Enyidda (1983) in his paper titled, Towards establishing a technical Base, observed that Nigeria's bold but rather bulky ride towards a meaningful and oriented technological adulthood does, therefore, depend principally on the accumulation of uncensored imported machinery and manpower or the accumulation of patented invention the world over. With the technological renaissance, it is clear that Nigeria hitherto had no industries as a nation. What exists are service stations, workshops, small factories and plants most of which is assembly plants of imported finished parts. For example, auto and motor-cycle assembly plants, which most of the time are wrongly referred to as industries. Enyida (1983) says that an industry is an amalgamation of interrelated, but autonomous specialized factories, the end product of which is a complete unit.

As a result of this knowledge, the government is establishing a machine tools' factory in Oshogbo knowing fully well that machine building is the corner stone of mechanization. With machine tools, Nigeria can build their own tractors for agricultural, industrial machines and equipment, spare parts and even new machine tools to suit Nigeria's Own type of raw products. There is a specific lack of such product especially for the preservation processing of food items.

The government has also established steel companies as a source of raw materials for the building of industries. These will feed the building and constructor sector and local steel work in the country. With a sound industrial base, Nigeria can then effectively utilize her indigenous technological manpower reserves, inventions and innovations of her indigenous geniuses.

It is only then that the creativity of indigenous technicians, scientist, and engineers can be challenged and taxed, who at present are under-utilized. Further suggestions on the steel companies will be their expansion to include scrap processing and recycling.

Enyida (1983), stated that as at now, they stand at 95.6 % At this juncture, the Federal Government has stopped the importation of science equipment. Fafunwa (1991) advertised that manufacturing factory should be established in Enugu and Minna.

The poor performance of science candidates in (SSCE) in the past three years based on the 6-3-3-4 system curricular, according to Ojo (1991), has been a headache to school authorities,.education policy makers parents and WAEC - examining body.

The appraisal of the first cycle of operation of the new curricula and students' performance reveal a worrisome trend that should be a source of genuine concern, both for the success of the new education policy which emphasized science and vocational disciplines and the possible attainment of the national goals of scientific and technological breakthrough.

This calls for the attention of educational administrators to review their perceptions on technical education, if they feel that it is a worthwhile venture, then a more viable means of developing technical education is necessary, in order to realism the benefits of technical education.

2.3 The National Policy on Education in Relation to Technical Education:

One of the cardinal objectives of the National policy on education (NPE) is to create a functional education and to make learning more relevant to the needs of the society. Technical education is one of the relevant areas of concentration needed for technological advancement. It is imperative to structure the secondary education in Nigeria. As a result, JSS and SSS were brought into existence, both to last for three years each. Nwogwugwu (1982) stated that junior high school seems to have been first introduced in Richmond Indiana in the United States in 1985.By 1920, there were a total of 883 of such schools being run either as autonomous institutions or as part of high school all over North America.

The JSS introduction was introduced in the United State for some specific reasons, among which are:

1. The inadequacy of classroom accommodation and heavy enrolment in the elementary and secondary schools. Junior high schools were found cheaper to build and run than the six year schools.

2. The junior high schools provided opportunity for broadening the school programme beyond what was available in the elementary grades.

RY

3. Junior high schools offered opportunity beyond the elementary grades and could retain more of its clients for three years, whereas the six year secondary programme had to be completed for any credit to be given for attendance.

   Furthermore, the comprehensive nature of the programme ensured that students were equipped with tools for a living in a society that was increasingly becoming industrial.

4. The comprehensive nature of the programme also made it possible for many students to discover areas in which they were interested and excelled.

Nigeria adopted the United States' system of education by introducing the JSS and the SSS. The federal government in its attempt to boost technical education in Nigeria, introduced the National policy on educational in 1977. The new system of education is known as the 6-3-3-4 system of Education.

According to the National policy on education (1981), one of the major focuses in the new system of education is technical education programme. the new educational system made provision for pre-vocational subjects such as, wood-work, metal-work, electronics, machines, local crafts, home economics and Business studies at the JSS level. At the SSS level, one vocational subject is made compulsory, while type-writing, short-hand, home economics, metal work and auto-mechanics including humanities form the electives. As stated by NPE (1981), the aim of the government in the new dispensation is that, students who leave secondary school level may go on to an apprantiship system of some other scheme for out of school vocational training.

The final stage is the tertiary stage which include the polytechnic and the universities.
At this stage, students are expected to choose their field of study arising from their aptitude and performance at the secondary school stage. Opportunities abound for candidates to be admitted to read and specialised in such courses and programmes as the National Certificate of Education (NCE) which lasts for three years, the Higher National Diploma (HND) which is for a period of four years and the Bachelor of Arts (B.A) or Bachelor of Science (B.Sc) programmes which is for a duration of four years or five years.

The aims and objectives of technical education is to be productive. That the individual will come to the full realisation of his or her potentials,so that individual can contribute to the economic development of the society in which they live.

For example, boys and girls will want to become self-subsistence and independent through their own education. They will want their work to be something more than a means of substance earning. Their dream will only be realised when appropriate programmes are established for them.

The primary issue of technological education is to prepare the youth for gainful employment, when the number of people who work increase in any society, that society will become more advanced. The economic value of technical education are many. Various studies have shown that the percentage of employment is reduced. In the view of Adesina (1977).

> The percentage of employment among those who have received technological education is much larger than the population that has not been trained and is seeking employment.

Apart from the issue of being employed, the worker also make contribution to the government through the taxes workers pay. There will be less crime in the society; more meaningful activities since people will have a conducive atmosphere to plan for tomorrow. Any programme set up to train the youths can be covered within the shortest time possible.

There are six technical and vocational schools in kaduna state. The breakdown is one government technical

For example, boys and girls will want to become self-subsistence and independent through their own education. They will want their work to be something more than a means of substance earning. Their dream will only be realised when appropriate programmes are established for them.

The primary issue of technological education is to prepare the youth for gainful employment, when the number of people who work increase in any society, that society will become more advanced. The economic value of technical education are many. Various studies have shown that the percentage of employment is reduced. In the view of Adesina (1977).

> The percentage of employment among those who have received technological education is much larger than the population that has not been trained and is seeking employment.

Apart from the issue of being employed, the worker also make contribution to the government through the taxes workers pay. There will be less crime in the society; more meaningful activities since people will have a conducive atmosphere to plan for tomorrow. Any programme set up to train the youths can be covered within the shortest time possible.

There are six technical and vocational schools in kaduna state. The breakdown is one government technical college situated in Kaduna town, two government secondary technical schools at Soba and Gwantu, two government vocational training centres at Soba for girls and Makarfi for boys and one commercial school in Zaria.

The secondary education is given in two stages: junior and senior secondary each of the three years duration. The broad aims of secondary education are preparation for useful living within the society and for higher education. The junior secondary school is both prevocational and academic and every student offers the following subjects:

1. Mathematics
2. English
3. Language of the Environment
4. One major Nigerian Language
5. Integrated Science
6. Social Studies
7. Arts and Music
8. Practice Agriculture
9. Religious Studies
10. Physical Education; and
11. Two pre-vocational subjects.

The prevocational subjects from which any two may be selected are:

1. Introductory Technology; subjects consists of woodwork, metal work, Electronics, Mechanics
2. Local crafts;
3. Home Economics studies; and
4. Business studies.

Schools which have the required facilities may also teach any or both of the non-vocational electives which are:

1. Arabic studies; and
2. French.

Evaluation and certification are based on the continuous assessment method and method and an end-of-course examination conducted by the appropriate ministry of education leading to the award of the junior school certificate.

THE NATIONAL POLICY ON EDUCATION IN RELATION TO TECHNICAL EDUCATION

The reason which prompted the introduction of the junior high school in North America are very pertinent in Nigeria today. Nwogwgwu (1982) noted that the junior high school seems to have been first introduced in Richmond, Indiana, U.S.a about 1895 and up till 1920, there a total of 883 such school running either as autonomous in institutions or as part of senior high school in the whole of North America.

By 1964, there were 7,143 separate junior high school in North America introduced for the following reasons, according to Fagbamiye (1982).

1. "There were inadequate classroom accommodation and enrolment in the elementary and secondary schools and junior high schools were found to be cheaper to build and run than the six-years high schools.

2. The junior high school provided an opportunity for broadening the school programme beyond what was then available in the elementary grades. For example, departmentalized instruction,enriched subject matter, foreign languages, workshops, laboratories and better teaching methods were introduced.

3. This comprehensive nature of the programmes made it possible for many students to discover areas in which they were interested and in which they could succeed and excel.

In Nigeria, reasons which prompted the introduction of junior secondary school programme include the fact that:

1. There was a rapid growth in the primary school environment in the 1970^{s} in Nigeria;
2. Primary and secondary school accommodation and facilities were inadequate and drop -out rate was high indeed;
3. Secondary school education was biased towards the grammar school type of education and those who are ill equiped for this type of bookish education were

termed failure;and

4. The junior secondary school education was meant to provide the students with some technical skills and vocations which the graduates could practice after leaving the Nigerian society.

When the first universal primary education programme was introduced in the former Western of Nigeria in of in 1955, the problem of large enrolment in primary schools and this later extended to the secondary schools. A large number of modern secondary schools of three years duration was introduced to take care of the overload of students.

These modern schools were comprehensive in nature and vocational in orientation. Modern secondary schools were later phased out in Nigeria.

According to the Nigerian Educational Research Council

(NERC) Report of 1980, the current interest in the establishment of junior secondary schools is a consequence of many expectations which the traditional grammar school type of school has failed to fulfil. The junior secondary schools like the secondary modern schools are expected to be pre-vocational, even though the secondary modern schools never attained the objectives set for them. The objectives of the junior secondary schools are two fold: prevocational and academic. All the basic subjects which will enable pupils to acquire further knowledge and develop skills are taught, and the products of these junior secondary schools are expected to proceed to senior secondary schools or leave the schools and go into vocational practice.

The senior secondary school is now comprehensive and the curriculum includes technical, commercial and vocational courses so that it will be able to absorb the junior secondary school leavers who want a complete secondary education. The old system secondary education was considered inadequate because it failed to prepare students for effective living in the rapid changing Nigeria society. The new system of society education is supposed to equip students intellectually and vocationally depending on the students' interests and capabilities.

2.4 PLANNING AND IMPLEMENTATION OF THE TECHNICAL EDUCATION IN JUNIOR SECONDARY SCHOOL IN KADUNA STATE

Planning has been described as intelligent preparation for action. It is a process of setting out in advance a pattern of action to bring about the achievement of a given objective. educational planning according to Ezeocha (1990) is process of identification of educational needs, the implementation which education

Educational planning involves obtaining and analysing statistics and data and using them to make projections of future development especially estimates of human and material resources needed to achieve proposed developments Planning is dependent upon the formulation of goals and objectives and availability of sufficient, and reliable data on which assessments are made and decisions reached on the basis of the data obtained and this involves high degree of skill, expertise and training.

There is great need to have a planned educational system and programmes. This need has become urgent because the Nigeria society has become more complex. Problems such as population explosion, manpower needs planning for the use of available natural resource have appeared. If education is to serve the needs of the society, it should be planned to solve the social, physical and economic problems that are facing the nation.Education is a powerful weapon with which a multi ethnic society like Nigeria can achieve national consciousness,national unity. If this is true, then there is a need to have a broad based national plan, spelling out its national philosophies and objectives which should guard education administrators and planners about the national education system.

Since Nigeria is in a hurry to catch up with the scientific advancement of developed nations, there is great need for well planned educational programmes especially in the areas of science and technology. Educational planning is also very necessary from economic point view. This is because education competes with other services like Health, Industries, Agriculture, and other sectors within the context of national development.

Proper allocation of scarce resources must be planned in order to avoid imbalance in the development of educational programmes . Adequate educational planning involves identification of needs at all level of the system and this helps minimise wastage in the educational system as well as duplication of facilities which are expensive. For efficient attainment of educational goals, adequate planning is highly desirable,also for smooth transfer from one level of education to another in the educational system.

Once the educational plan has been prepared by experts, the next phase of the planning process is the implementation of the plan. Implementation is putting the decisions reached and agreed upon into action. Plan implementation has grown to be the most difficult phase of the planning process. Even when a plan is rational, comprehensive coherent and consistent, its implementation may still be partial, slow or inefficient and still be inferior to what would have been expected in the absence of any plan.

Plan implementation is seen to involve the following stage according to Ezeocha (1990).

(a) preparation of programme of action.

(b) Obtaining approval from relevant authority.

(c) organising the implementation units.

(d) Co-ordinating and controlling the implementation of the plan.

Once the overall plan has been made, it has to be resolved into programmes and projects . To implement a project for example, building a secondary school, it is important to have a programme preparation. Then there is a task of creating detailed plan for the deployment of necessary resources such as time, money,skills and equipment. The second step in the implementation process is obtaining legal approval. Every step of the plan's implement has to be accompanied by a campaign to explain its aims to those who will be affected by it. The success of the implementation depends on the success of the cooperative activities of those concerned, and the experience of the programmers and the ability to apply a systematic approach. In the third stage of the plan development, the list of the possible tasks ahead are itemised and arranged logically in order of priorities.

After itemising the tasks, a clear picture of all the activities that make up the project and their interrelationship become very obvious and this helps to make the control and coordination of the implementation of the plan easier.

According to Fagbemi (1977), there is lack of understanding of the new system even by those who are supposed to operate it. For example the planning failed to consider seriously the issues of funds insufficient teachers, especially in the technically based subjects and pre-vocational subjects. Others are equipments, workshops, the technical know-how for users, electricity, most of these schools are found in the rural areas. The end result of which materials are wasted.

In the Guardian newspaper of Tuesday, April 6, (1987),Uche, argued that:

> At the Federal Government College, Ikot-Ekpene in Akwa Ibom State, it was reported that equipment worth over ₦100,000 delivered in 1975 has been rusting away unistalled, so is the story in Rivers State and Kaduna State. Equipment tools ordered for the take-off the 6-3-3-4 system of education programme have since been left in the open to waste.

Implementing require preparation, provision of facilities, trained staff to man important equipments recruitment of personnel both teaching and supportive. It will require time to enable the various activities to take off. Restructuring and replacement may be required. Determination of total resources to meet the need of the population target of the programme is imperative.

In education, according to Nwachukwu and Agbebi (1985), where the cost and consequences are far greater than the hypothecial or manufacturer, it is uncommon to find an excellent programme planned with adequate effort to make it through to the expected end. This is, therefore, what has probably happened to the 3-3 programme. The implementation phase of the 3-3 programme started differently from state to sate, it is believed that some states produced their first batch of senior secondary graduates in 1990. Others graduated in 1986/89 academic year. Some states started the SSS on paper only, with no facilities whatever.

The federal government purchased equipment tools for 3-3 programme worth about ₦12,664,154 in 1989. Each sate in the federation received share and almost all junior and senior secondary schools in the country have such equipments. Schools without laboratories have such units either in the store or near the principal's office. It is also noted that some technical teachers' institutions do not have some of these equipment found in secondary schools, for example, the Kafanchan College of Education as indicated by an official of the sate ministry of education, graduate of these institutions are expected to teach, using these machines that they are unfamiliar with.

For effective teaching of any content, area the scope of the scheme should be beyond what the student need. This will enable the teacher to be an authority in order to make the impact of the skill to the students. This is the dilemma of the implementation phase of the National Policy of Education. So long as laboratories of these teachers preparation in their institutions continue, it will affect the quality of teachers produced, consequently affect the students because the quality of students in any programme cannot rise above the quality of their teachers.

This observation concerning the 3-3 programmes makes only few students offer science/technical subjects and their percentage is relatively poor. The attitude of the Nigerian public toward technical education has not changed much, this is probably the anticipation of the researcher in conducting the research in question.

The UPE (1981) in its policy also say each local government area should have a technical school. The federal ministry of Education, Fafunaw (1990) announced that the federal government has secured a World bank Loan of ₦64,000,000 for the establishment and development of six new colleges of education (technical). He also announced that another loan of ₦250,000,000 has been arranged for the supply equipment for four federal polytechnic at Bida, Kaura Namoda, Nassarawa and Ilaro respectively.

The reporter newspaper, Monday, February 26, 1990, also stated that the government has entered a number of technical Aids Corps Programme under bilateral agreement with foreign governments. The programmes are designed to provide manpower on the request in specific areas of national needs including the Technical Training programmes(TTTP).

The government has also enhanced the prospects of technicians in relation to graduates and other professional programmes with respect to their status and enumerations.Holders of the HND have been placed on grade level 08 or USS 7 similar to graduate of degree holders.

Apart from harmonization exercise, the president at the 30th Anniversary of Yaba College of Technology in 1988 announced the extension of Unified Salary scale (USS) to staff of the federal Polytechnic and Colleges of education in the country. This measure is intended to boost technical education and to retain well qualified and competent technical educators in the technological institutions.

Perceptions of educational administration and teachers of introductory Technology in view of the topics discussed so far is also imperative to development of technical education. They are those that partly make the policies and, they are implementers. Their attitude is so important to the way they will execute the 6-3-3-4 programme.

No education programme can ever succeed without adequate number of well qualified teachers. The importance of well qualified teachers in the implementation of the junior secondary school technical education programme therefore cannot be over emphasised. Some available research reports in some states of the federation indicate that may many of our technical schools and other schools that offer vocational and technical courses lack competent teachers. For example in a committee report submitted to the Anambra State ministry of Education on the realisation of technical education in Anambra State, Nduanya (1986) remarked that a survey of the school system has disappointingly shown that none of the teachers currently teaching introductory technology in the state is actually qualified for that assignment

Again in a key note address at the national workshop on science and Technology Development in Nigeria held at the Anamber state polytechnic, Oko, the former Anambra State Commissioner for Education, Mrs. Grace Obayi Lamented that reports from the inspectors of education showed that equipment which have been sent to schools are not being put to use and the explanation to this could be that the teachers themselves are not sure of how to use the equipment and the facilities.

The use of appropriate teaching method in the teaching vocational subjects is also very important to the success of the junior secondary school programme. it was discovered that lectures, discussions and tutorials are mainly used in schools in place of workshop practice, field work and practical lessons. So even if a teacher is qualified, but he fails to employ appropriate teaching methods, his teaching will still be ineffective. Therefore, good teaching methods should be used by teachers of introductory technology in the teaching vocational subjects to junior secondary school students.

The form of presentation of the subject matter of these vocational subjects to the junior secondary school students is also important for learning. In Nigeria, there is the practice of teaching technical and vocational subjects and skills mainly as concepts rather than for functional use in the society. This approach should change if we are to make any impact on vocational training of these young people. the products of the junior secondary school scheme, if well trained should be able to make impact in production of technical manpower for the nation.

The main objective of the new vocational educational education system is to inculcate in the junior secondary school products the vital skills needed for self-realization necessary for survival in the modern age of science and technology. The junior secondary school students are expected to graduate with vocational and technical skills needed for self-employment. Their new education system started in early 1980's at the time when Nigeria started to experience oil glut and general economic recession.

Education in general is very expensive let alone implementing the new 6-3-3-4 system with vocational and technical junior secondary school programme. The federal government is finding it difficult to fund educational developments. The inability of the federal and state governments to meaningfully fund education as observed by Olaitan (1986) is manifested in the irregular payment of teacher's salaries and allowances, ill equipped school laboratories and workshops and shortage of infrastructure in many schools. Schools are unable to provide basic materials, such as classroom furniture and school buildings have not been renovated for long period of time. In some states, the technical equipment supplied by government for the junior secondary school technical training programme have not been fully installed due to lack of workshop buildings to house them. In other schools where they have installed the equipment, these may be lack of electricity to operate them especially in rural secondary schools. It therefore means that various strategies for financing vocational and technical education should be sought if the 6-3-3-4 system of education is to be effectively implemented.

To make meaningful attempt at financing vocational and technical education, federal and state governments should establish a fund for technical education which should be different from the existing industrial Training Fund (ITF). Money can be raised through Endowments, Taxes from industries and commercial Enterprises, money from education taxes and levies, property taxes and so on. These funds could be used for producing low cost vocational and technical education equipment which should be distributed to schools. Also, funds should be made available to schools in the form of grants or through provision of teaching materials or the provision of school infrastructures required for teaching vocational and technical skills at the junior secondary school level.

The new 3-3 system of secondary education has various implications for Nigeria's economic development. Adesina (1977) noted that a developing society such as ours needs to develop in Agricultural Industry as well as in Building, Chemical Technology, Textiles, Transport, students in the schools sampled at the West African School and General Certificate of Education (ordinary level) examination during the period 1976 to 1986 was so low that did not exceed 20 percent; 7% of the respondents reported that they wanted jobs by government upon graduation, a negation of the spirit of self-reliance and job-creation rather than job-seeking; 7.3 respondents reported making technology a target of their career, a negation of government's intention for the graduates of the 6-3-3-4 programme and the existence of the guidance and counselling services in all the four secondary schools surveyed. The study concluded that the 6-3-3-4 objectives were not being fully realised at the JSS level in the four secondary schools in Zaria that were studied.

Another study on the subject is that of Abdullahi (1987) who studied the implementation of JSS pre-vocational subjects in Argungu Local Government Area of Sokoto state. The study focused on facilities, quality of students admitted, equipped workshops, quality of staff, support from the Ministry of Education. The study found that facilities in the twenty JSS in Argungu Local Government Educational Zone studied were inadequate, that the quality of some of the students admitted was extremely low, that some of the teaching staff lacked skill in the practical teaching of vocational subjects, level) examination during the period 1976 to 1986 was so low that did not exceed 20 percent; 7% of the respondents reported that they wanted jobs by government upon graduation, a negation of the spirit of self-reliance and job-creation rather than job-seeking; 7.3 respondents reported making technology a target of their career, a negation of government's intention for the graduates of the 6-3-3-4 programme and the existence of the guidance and counselling services in all the four secondary schools surveyed. The study concluded that the 6-3-3-4 objectives were not being fully realised at the JSS level in the four secondary schools in Zaria that were studied.

Another study on the subject is that of Abdullahi (1987) who studied the implementation of JSS pre-vocational subjects in Argungu Local Government Area of Sokoto state. The study focused on facilities, quality of students admitted, equipped workshops, quality of staff, support from the Ministry of Education. The study found that facilities in the twenty JSS in Argungu Local Government Educational Zone studied were inadequate, that the quality of some of the students admitted was extremely low, that some of the teaching staff lacked skill in the practical teaching of vocational subjects, and little assistance received from the Ministry of Education. He concluded that the JSS pre-vocational subjects in Argungu local Government Area Sokoto sate was facing obstacles which inhibited its successful implementation.

Another related study is the one conducted by Wajiga (1991) who examined the secondary school curriculum of the new system of education (6-3-3-4) in Hong Local Government area of the then Gongola State. The study used questionnaire to survey five secondary schools. It was revealed that the implementation processes of the 6-3-3-4 educational system had been slow. There was a shortage of manpower in some subject areas such as technical and science subjects. Guidance counsellors were few and were not fully utilized. There were inadequate teaching aids, laboratory equipment, textbooks, and recreational facilities in the schools. It was also found that there was inadequate fund to implement the programmes in all the five schools.

A recent study on the implementation of the junior secondary school pre- vocational subjects in Sabon- gari Local Government area in Zaria was conducted by Abdullahi (1994) . Nine secondary schools were covered by the study. the survey schools were covered by the study. The survey research method was adopted. Questionnaire and interview were the instruments used in gathering data. It found that there was inadequate manpower to teach pre-vocational subjects like woodwork, carpentry, typing, business studies and home economics. Fund was found to be inadequate. Tools and equipment for teaching and learning were inadequate. The study concluded that pre-vocational subjects were not properly implemented in the secondary schools studied and attributed this to lack of finance, skilled personnel, instructional facilities and immaturity of the students.

2.6 Summary

This chapter has looked at the development of technical education in Nigeria, the provisions of the National policy on Technical Education in relation to technical education and the problem of implementing the junior secondary school vocational and technical programmes.

Though the government has realised the importance of technical and vocational education and has been making efforts towards its development, the current economic situation has made it easy for her to finance the programme effectively.

Government must evolve new strategies which would enable her to raise more fund, provide equipment and school infrastructures,train and remunerate teachers adequately for the successful implementation of the vocational and technical education programmes of junior secondary schools.

This is important if the noble objectives of technical education programme are to be realised for the benefit of the individual and the Nigerian society at large.

CHAPTER THREE

3.0 RESEARCH DESIGN, METHODS AND PROCEDURES

3.1 INTRODUCTION

This chapter presents the research design, population, sample and the procedure, the instrument and methods of collecting data as well as methods of Data Analysis and interpretation.

3.2 RESEARCH METHOD ADOPTED

The research method adopted for conducting this study is survey research method. It was adopted for conducting this study because it involves the gathering of research data from Ministry of Education, Zonal education Officers, National Board for Technical Education, Principals and teachers located in different parts of Kaduna State. The method is widely used to conduct research involving populations whose subjects are scattered over a geographical area. It is for this reason that this method was considered appropriate for conducting this study.

3.3 The Population of the Study:

The population of the study consisted of 150 senior officials from the Ministry of Education office the Zonal Education offices from the four Education Zones of the State. Principals of 100 secondary schools and 400 teachers of introductory technology in the junior secondary schools formed the population. Only the junior secondary school were used for this study, because the junior secondary course is pre-vocational and introductory technology is taught during the first three years of the secondary school education.

3.4 The Sample and Sampling Procedure

The sample is made up of 50 senior staff from Kaduna state Ministry of Education who are respondent for secondary education in the Ministry and the Zonal officers spread a cross the state about 50 principals and 200 teachers of introductory technology from the selected schools were used as sample.

The Stratified random sampling was used with the three group respondents separately addressed, which means all senior officers of the ministry of education 100 of them were numbered and 50 were picked. All the principals were put together and 50 were picked lastly the 200 introductory technology teachers were numbered and 100 were picked. There were 300 respondents all together that were finally used. The row score got was later analysed.

3.5 Administration of Instrumentation

The instrument used for collecting data for this study include the questionnaire, oral interview schedule and record. Part one of the questionnaire consisted of background information and the personal data of the respondents. The personal data such as professional experience and qualifications of the respondent were stated.

Part two of the questionnaire contains questions of the ministry of education officials, principals and teachers about planning of technical education in Kaduna State. Questions were also asked on the problems facing the full implementation of the junior secondary school introductory technology programme in the state. Other questions centered on various aspect of the programme such as staffing, equipment, workshops and infrastructures for the implementation of junior secondary school technical education programme. there was a question on the availability of fund for the programme.

3.6 Method of Data Collection

The questionnaire were distributed to the ministry of education official principal of selected secondary schools and teachers of introductory technology by the researcher. Other assistance helped in distributing the questionnaire to the teachers in the sub-urban schools used for the study. The questionnaire were later collected by the researcher.

The researcher also visited the M.O.E officials and had oral interviews with them on the problems of planning and implementation of the junior secondary school technical education programme in the state. Some data were also collected from the ministry of education, as records.

3.7 Administration of the Questionnaire

The questionnaire which was the main instrument used for this study was validated by experts before they were distributed. Both the statistician and the supervisor checked the questionnaire items to ensure that the Research Questions and the Hypotheses stated in chapter one of the study are considered.

3.8 Methods of Data Analysis:-

Analysis of data involves categorizing, ordering, manipulating and summarizing the various data collected for a research study. The main purpose being to reduce data in such a way as to render them useful in answering research questions and testing the hypotheses, according to Kerlinger (1966)

Like types of the respondents percentage were used. in part two they respondent were asked to respond according to how the perceive the problems under: Strongly Agree had 5 points, Agree had 4 points, Disagree had 3 points, strongly Disagree had 2 points, and

Undecided had 1 point.

The responses was analysed using the statistical technique of Analysis of variance (ANOVA) and the level of significance was fixed at 0.05. The data collected were described, analysed and interpretation in Chapter 4.

CHAPTER FOUR

4.0 ANALYSIS AND DISCUSSION OF RESULT

4.1 Introduction

This study was conducted in order to find out the perception of the Educational Administrators Principal and Teachers of Introductory Technology about the junior secondary school programme in Kaduna State. The data collected are presently analysed and discussed and the Hypotheses are tested using Percentage and Analysis of variance.

Section 1 : Analysis of Personal Data of The Respondents:

Here, the various aspects of the characteristics of the respondents indicated in the questionnaire are analysed. The analysis centered on the qualifications and experience of the respondents which are summarized in the tables:below.

Table 4.1: Qualifications of Ministry of Education Officials and School Principals:

Qualification	Respondents	Percentage
N.C.E. Technical	10	10.00%
B.A/B.SC. Education	45	45.00%
B.Ed. Technical	15	15.00%
M.Ed.	11	11.00%
H.N.D.	19	19.00%
Total	100	100.00%

About 10 percent of the respondents hold NCE technical certificate and they are found in the Ministry and in the Zonal offices. All the principals used in the study hold university degree. Many hold degrees in education while a few have masters degrees in education. 19 percent of the respondents hold the Higher National Diploma Certificate.

Table 4.2: Qualification of Teachers of Introductory Technology:

Qualification	Respondents	Percentage
N.C.E.	100	50.00%
B.A/B.SC. Education	15	7.50%
B.Ed. Technical	10	5.00%
H.N.D.	65	32.00%
T.C. II/FTC	6	3.00%
M.Ed.	4	2.00%
Total	200	100.00%

Table 4.2 shows that about half of the respondents who teach at the junior secondary schools used for the study have NCE qualification. 12.5% of the teachers are graduate teachers while 32.5% percent have Higher National Diploma qualification. Two percent of the teachers have masters degree in education. About three percent of the teachers still teach with teachers' grade two certificate in the junior secondary schools. The table also shows that only about 15% of the teachers

handling the junior secondary school programmes are university graduates while about 80% of the teachers hold NCE and HND qualifications. These results indicates that there are not enough well qualified teachers for the teaching of the junior secondary school programmes in the schools.

Table 4.3: Experience of Teachers of Introductory Technology:

Experience	respondents	Percentage
0 - 5 years	60	30.00%
6 - 6 years	90	45.00%
11 -10 years	35	17.50%
over 15 years	15	7.50%
Total	200	100.00%

Table 4.3 shows that 305 of the teachers have 0 - 5 years of teaching experience, while 45% of the teachers have 6 - 10 years of teaching experience. About 18% of the teachers have 11 - 15 years of teaching experience of less than ten years.

Section 2: Analysis of Items Related to the Hypotheses:

In this section, the hypotheses are tested and the Analysis of variance statistics are used to test the hypotheses at 0.05 level of significance. The test is used in order to test the significance of the frequency and percentages of the responses of the three groups of respondents, teachers, principals and Ministry officials are shown in the tables.

4.4 Hypothesis One

There is no significant difference in the opinions of teachers and principals and ministry of education officials about the planning of the junior secondary school technical education programmes in Kaduna state.

Hypothesis One was tested by means of frequencies and percentages distributions and by the use of One-way Analysis of Variance. The responses of the teachers, principals and ministry of education officials were converted to raw scores, frequencies and percentages as in table 4.4. The test was also used to determine whether the is a significant difference in the perceptions of the three groups of respondents about the planning of the junior secondary school technical education programmes in Kaduna state.

Table 4.4: Respondents' Opinions on Whether the Junior Secondary School Technical Education Programme is well Planned

Item	Teachers		Principals		M.O.E. Officials	
	Freq.	%	Freq.	%	Freq.	%
SA	15	7.00	5	10.00	20	40.00
A	45	22.50	4	8.00	10	22.00
U	10	5.00	2	4.00	4	8.00
D	50	25.00	14	28.00	6	12.00
SD	80	40.00	25	50.00	10	20.00
Total	200	100.00	50	100.00	50	100.00
	X	X^2	Y	Y^2	Z	Z^2
	15	225	5	25	20	400
	45	2025	4	16	10	100
	10	100	2	4	4	16
	50	2500	14	196	6	36
	80	6400	25	625	10	100
Total	200	11250	50	866	50	652

Instable 4.4 65% of the teachers disagreed that the junior secondary school programme is well planned, while only 30% of them agreed that the programme is well planned. 78% of the principals responded like the teachers that the junior secondary programmes are not well planned. 18% of the principals agreed that the programmes are planned. As for the ministry of education officials, 60% of them said that the junior secondary school programmes are well planned, while only 32% of them said that the programmes are not well planned.

Table 4.4

One-Way Analysis of Variance (ANOVA) Table Examining *the difference in the Opinions of Teachers, Principals* and Ministry of Education Officials about the Planing of the Junior Secondary School Technical Education Programmes in Kaduna State.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Sum of Squares (Variance)	F
Between Groups	3.000	2	1.500	4.78
Within Groups	3.768	12	314	
Total	6.768	14		

Testing F for Significance

In Table 4.4 above, the greater variance has a degree of freedom (df)=2 and the smaller variance has df=12. BY examining the table of critical values of F (see Appendix 2) and looking down until one gets to 12 and then across to 2, it is shown that the critical value is 3.89 at 0.05 level of significance. Since the F - Value obtained by calculation (4.78) is greater than the table value (3.89), it is concluded that there is a significant difference in the opinions of teachers, principals and Ministry of Education officials about the planning of the junior secondary school technical education programmes in Kaduna State.

There is therefore a significant difference in the perception of teachers, principal and ministry of junior secondary schools to cater for the implementation of the introductory technology programmes.

Table 4.5

One-Way Analysis of Variance (ANOVA) Table Examining the Opinions of Teachers, Principals and Ministry Official about the provision of Adequate Workshops and Workrooms for the Junior secondary School Technical Programme.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Sum of Squares (Variance)	F
Between Groups	3,000	2	1,500	1.87
Within Groups	9,600	12	800	
Total	12,600	14		

Testing F for Significance

In Table 4.5 above, the greater variance has a degree of freedom (df)=2 and the smaller variance has df=12. By examining the table of critical values of F (see Appendix.2) and looking down until one gets to 12 and then across to 2, it is shown that the critical value is 3.89 at 0.05 level for significance. Since the F-value obtained by calculation (1.87) is less than the table value (3.89), it is concluded that there is no significant difference in the opinions of teachers, principals and Ministry of Education officials about the adequacy of workshops and workrooms in junior secondary schools.

Observations made by the researcher during the data collection visits to the schools show that the lack work benches, and tables, drawing boards, and students' stands which are necessary tools for the construction and fabrication. There was little evidence of practical work and it appear that students concentrate more in textbooks work rather than in practical. It was also discovered that in some junior secondary schools, there are no workshops and workrooms, while in others equipment and materials are lying waste in the stores.

4.6 Hypothesis Three

There is no significance difference in the opinions of teachers, principals, and ministry officials about the adequacy in the supply of teaching and learning materials for the introductory technology programmes.

The responses of teachers, principals and ministry officials about the adequacy of teaching and learning materials for introductory technology programmes are analysed using frequency, percentages and one way analysis of variance, as shown in Table 4.6.

adequacy of workshops and workrooms in junior secondary schools.

Observations made by the researcher during the data collection visits to the schools show that the lack work benches, and tables, drawing boards, and students' stands which are necessary tools for the construction and fabrication. There was little evidence of practical work and it appear that students concentrate more in textbooks work rather than in practical. It was also discovered that in some junior secondary schools, there are no workshops and workrooms, while in others equipment and materials are lying waste in the stores.

4.6 Hypothesis Three

There is no significance difference in the opinions of teachers, principals, and ministry officials about the adequacy in the supply of teaching and learning materials for the introductory technology programmes.

The responses of teachers, principals and ministry officials about the adequacy of teaching and learning materials for introductory technology programmes are analysed using frequency, percentages and one way analysis of variance, as shown in Table 4.6.

Table 4.6: Analysis of Respondents' Opinions on the Adequacy of Teaching and Learning Materials for the Introductory Technology Programme.

	Teachers		Principals		M.O.E. Officials	
Item	Freq.	%	Freq.	%	Freq.	%
SA	6	3.00	4	8.00	20	40.00
A	12	6.00	10	20.00	16	32.00
U	20	10.00	0	0.00	4	8.00
D	40	20.00	20	40.00	8	16.00
SD	122	61.00	16	32.00	2	4.00
Total	200	100.00	50	100.00	50	100.00
	X	X^2	Y	Y^2	Z	Z^2
	6	36	4	16	20	400
	12	144	10	100	16	256
	20	400	0	0	4	16
	40	1600	20	400	8	64
	122	1484	16	256	2	4
Total	200	3664	50	772	50	740

Table 4.6 shows the opinions of the teachers, principals and ministry officials on whether teaching and learning materials are adequate in quantity. The shows that 81 percent of the teachers and 72 percent of the principals agreed that teaching and learning materials supplied to the junior secondary schools are not adequate in quantity for the schools. The Ministry of Education officials disagreed with the teachers' and principals' opinions and 72 percent of them said that the materials

are adequate for teaching learning in the schools. The teachers and the principals also agreed that many teachers do not know how to use many of the materials because they are not well trained and qualified to use the materials. The three respondents are not sure about the quality of the materials.

One -Way Analysis of Variance (ANOVA) Table. Examining the Opinions of Teachers, Principals and Ministry Officials about the Adequacy in the supply of Teaching and Learning Materials for the Introductory Technology Programmes.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Sum of Squares (Variance)	F
Between Groups	3,000	2	1,500	4.7
Within Groups	2824	12	318.67	
Total	5,824	14		

Testing F for Significance

In Table 4.6 above, the greater variance has a degree of freedom (df) =2 and the smaller variance has df=12. By examining the table of critical values of F (see Appendix 2) and looking down until one gets to 12 and then across to 2, it is shown that the critical value is 3.89 at 0.05 level of significance. Since the F - value obtained by calculation (4.7) is greater than the table value (3.89), it is concluded that there is a significant difference in the opinions of teachers, principals and Ministry of Education officials about the adequacy in the supply of teaching and learning materials for the introductory technology programme.

The researcher was informed by the specialists on technical education in the ministry that the materials were imported from Holland because they were cheap. The data in table 4.6 indicate that materials are not supplied to the school in adequate quantity for the implementation of the junior secondary school programmes. The results indicated a difference in the opinions of teachers, principals and M.O.E. officials. Teachers and principals agreed that the materials are not adequate while the ministry officials stated that the materials are adequate indicating a difference in the opinions of the respondents.

4.7 Hypothesis Four

There is no significance difference in the opinions of Teachers, Principals and Ministry Officials about the funding of the junior secondary school technical programmes.

Hypothesis three was tested by means of frequency and percentage distributions and by the use of one way

Analysis of Variance was also used to determine whether there are significant differences in the opinions of the three groups of respondents about provision of adequate funds to the schools.

Table 4.7: Respondents' Opinions on the Provision of Adequate Funds to the Schools for the Junior Secondary Technical Education Programmes

Table 4.7 shows the respondents' opinions on the release of adequate funds to the secondary schools for implementation of the junior secondary school technical education programmes.

Item	Teachers		Principals		M.O.E. Officials	
	Freq.	%	Freq.	%	Freq.	%
SA	10	5.00	0	0.00	24	48.00
A	25	12.50	6	12.00	10	20.00
U	11	5.50	2	4.00	2	4.00
D	55	27.50	8	16.00	5	10.00
SD	99	49.50	34	68.00	9	18.00
Total	200	100.00%	50	100.00%	50	100.00
	X	X^2	Y	Y^2	Z	Z^2
	10	100	0	0	24	276
	25	625	6	36	10	100
	11	121	2	4	2	4
	55	3025	8	64	5	25
	99	9801	34	1156	9	81
Total	200	13672	50	1260	50	786

that the junior secondary schools are provided with adequate fund for implementing the junior secondary programmes. 17.5% of the teachers agreed while 5.5% of the teachers were undecided on the provision of adequate fund to the schools. About 84% of the principals also disagreed that fund was promptly provided to the schools. 17.5% of the principals agreed while 5.5% was undecided about the sufficient funding of the junior secondary school programmes.

On the other hand, 68% of the ministry of education officials used for this study agreed that there wa adequate funding and prompt release of money to the schools. About 28% of the ministry of education official however disagreed that funding is not adequate for the implementation of the school technical education programmes. About four percent of the ministry of education officials were undecided on the issues of provision of adequate fund by the ministry.

One-Way Analysis of Variance (ANOVA) Table Examining the difference in the Opinions of Teachers, Principals and Ministry Officials about the funding of the Junior Secondary School Technical Programme.

Table 4.7

Source of Variation	Sum of Squares	Degree of Freedom	Mean Sum of Squares (Variance)	F
Between Groups	3,000	2	1,500	2.68
Within Groups	6,718	12	559.8	
Total	9718	14		

Testing F for Significance

In Table 4.7 above, the greater variance has a degree of freedom (df)=2 and the smaller variance has df=12. By examining the table of critical values of F (see Appendix 2) and looking down until one gets to 12 and then across to, it is shown that the critical value is 3.89 at 0.05 level of significance. Since the F - value obtained by calculation (2.68) is less than the table value (3.89), it is concluded that there is no significant difference in the opinions of teachers, principals and Ministry of Education Officials about the funding of the junior secondary school technical education programme.

There is therefore a difference in the opinions of the three groups of respondents about funding and release of funds to the schools. Both teachers and principals said that the funds provided to the schools are not adequate, while the ministry of education officials argued that adequate funds are provided to the schools. It was noted by the research that the term adequate funding is relative because what may be adequate funding for one school, may not be adequate funding for another school as this may depend on the size and conditions of the school.

4.8 Hypothesis Five

There is no significance difference in the opinions of teachers, principals and ministry officials about the fact that the junior secondary school technical education programmes are not taught by sufficiently qualified technical teachers.

The opinions of teachers, principals and the ministry officials were taken on the qualification of the junior secondary school teachers. There responses were converted to frequencies and percentages and the One-Way Analysis of variance was used to test whether there are significant difference between the variables as shown in table 4.8.

Table 4.8: Respondents' Opinions on the Availability of Qualified Technical Teachers for the Junior Secondary School Technical education programmes.

Item	Teachers		Principals		M.O.E. Officials	
	Freq.	%	Freq.	%	Freq.	%
SA	80	40.00	25	50.00	20	40.00
A	50	25.00	14	28.00	12	25.00
U	10	5.00	2	4.00	3	5.00
D	45	22.50	4	8.00	11	22.50
SD	15	7.50	5	10.00	4	7.50
Total	200	100.00	50	100.00	50	100.00
	X	X^2	Y	Y^2	Z	Z^2
	80	6400	25	625	20	400
	50	2500	14	196	12	144
	10	100	2	4	3	9
	45	2025	4	16	11	121
	15	225	5	25	4	16
Total	200	11250	50	866	50	690

Values for One-way Analysis of Variance

In table 4.8, the respondents' opinions about the availability of qualified technical teachers in the schools are presented. About 65% of the teachers, 78 of the principals and 65% of ministry of education officials agreed that well qualified technical teachers are not available in the schools for the implementation of the junior secondary school technical programmes. The opinions of these three groups of respondents are similar and homogenous indicating that the schools do not have enough well qualified technical teachers for the teaching of junior secondary school programmes.

From the responses on the teachers' qualifications stated in table 4.3, 50% of the teachers have NCE Certificates while 32.5% have HND qualification. Only 5% of the teachers have B.ed degree in technical education. These findings on the teachers as stated in table 4.8. These findings confirm that majority of the junior secondary school teachers are not well qualified. We qualified B.ed. teachers should be appointed for the teaching of the junior secondary school programmes.

4.9 Hypothesis Six:

There is no significant difference in the opinions of teachers, principals and ministry of education officials on whether the junior secondary school technical education programme is adequately implemented in Kaduna state.

Percentage distribution and the one-way analysis of variance were use to test this hypothesis on the implementation of the junior secondary school technical education programmes. The frequencies and the percentages are shown in table 4.9.

Table 4: 9: Respondents; Opinion on whether the Junior Secondary Schools Programme is adequately implemented in Kaduna State.

Item	Teachers		Principals		M.O.E Officials	
	Freq.	%	Freq.	&	Freq.	%
SA	16	8.00	5	10.00	25	50.00
A	38	19.00	5	10.00	10	20.00
U	6	3.00	10	20.00	6	12.00
D	46	23.00	15	30.00	5	10.00
SD	94	47.00	15	30.00	4	8.00
Total	200	100.00	50	100.00	50	100.00
	X	X^2	Y	Y^2	Z	Z^2
	16	256	5	25	25	625
	38	1444	5	25	10	100
	6	36	10	100	6	36
	46	2116	15	225	5	25
	94	8836	15	225	4	10
Total	200	12688	50	600	50	802

Table 4.9 shows the respondents' opinion about the implementation of the junior secondary school technical education programmes. about 70% of the teachers are of the opinion that the programme is not well implemented, while 27% of them said that the programme is well implemented. In the case of the principals, 60% of them disagreed that the programme is well implemented, while 20% agreed that the programme is well implemented. About 20% of the principals were undecided on this issue of implementation. On the other hand, the ministry of education officials disagreed with the teachers and the principals on this issue of the implementation of the

Table 4: 9: Respondents; Opinion on whether the Junior Secondary Schools Programme is adequately implemented in Kaduna State.

Item	Teachers		Principals		M.O.E Officials	
	Freq.	%	Freq.	&	Freq.	%
SA	16	8.00	5	10.00	25	50.00
A	38	19.00	5	10.00	10	20.00
U	6	3.00	10	20.00	6	12.00
D	46	23.00	15	30.00	5	10.00
SD	94	47.00	15	30.00	4	8.00
Total	200	100.00	50	100.00	50	100.00
	X	X^2	Y	Y^2	Z	Z^2
	16	256	5	25	25	625
	38	1444	5	25	10	100
	6	36	10	100	6	36
	46	2116	15	225	5	25
	94	8836	15	225	4	10
Total	200	12688	50	600	50	802

Table 4.9 shows the respondents' opinion about the implementation of the junior secondary school technical education programmes. about 70% of the teachers are of the opinion that the programme is not well implemented, while 27% of them said that the programme is well implemented. In the case of the principals, 60% of them disagreed that the programme is well implemented, while 20% agreed that the programme is well implemented. About 20% of the principals were undecided on this issue of implementation. On the other hand, the ministry of education officials disagreed with the teachers and the principals on this issue of the implementation of the

programme. About 70% of the ministry officials agreed that the programme is well implemented, while only about 18% of them are of the view that the programme is not well implemented.

Table 4.9

One- way Analysis of variance (ANOVA) Table Examining the difference in the Opinions of Teachers, Principals and Ministry Officials about on whether the Junior Secondary School Technical Programme are adequately implemented in Kaduna State

Source of Variation	Sum of Squares	Degree of Freedom	Mean Sum of Squares (Variance)	F
Between Groups	3,000	2	1.500	3.54
Within Groups	50906	12	424.2	
Total	8,090	14		

Testing F for significance;

In Table 4.9 above, the greater variance has a degree of freedom (df) =2 and the smaller variance has df = 12. By examining the table of critical values of F (see Appendix 2)and looking down until one get to 12 and then across to 2, it is show that the critical value is 3.89 at 0.05 level of significance. Since the F - Value obtained by calculation (3.54) is less than the table value (3.89), it is concluded that there is no significant difference in the opinions of Teachers, Principals and Ministry of Education Officials on whether the Junior Secondary School Technical Education Programmes are well implemented in Kaduna State.

There is therefore no significant difference in the opinions of teachers, principals and ministry of education officials on whether the junior secondary school technical education programmes are well implemented in Kaduna state. The teachers and the principals stated that the programmes were not well implemented because of inadequate workshop spaces, shortage of funds, lack of adequate teaching and learning materials and due to the insufficient number of well qualified teachers on the other hand argued that the programme. The ministry of education officials on the other hand argued that the programmes are well implemented in the schools.

There is a difference in the opinions of the teachers, principals and the ministry of education officials about the implementation of the junior secondary school programmes in the state. Earlier findings of this study indicated that qualified teachers are not enough for the schools as in tables 4.8 and 4.6. Learning materials are not enough as in table 4.6, workshops and workrooms are not sufficient in the schools as in table 4.5. These shortcoming in the schools appear to have influenced the teachers and the principals in responding that the programme is not well implemented since they are directly involved in the implementation processes in the schools. On the other hand, the ministry of education officials are mainly concerned with the planning aspect of the scheme and therefore had different opinion from those of the implementation of the programme.

4.8 SUMMARY OF HYPOTHESES TESTING AND RESULTS

HO	STATEMENT	DECISION/ RESULTS
HO_1	There is no significance difference in the opinion of teachers, principals and ministry officials school introductory technology programming in Kaduna state.	Null hypotheses was rejected $P>0.05$
HO_2	There is no significant difference in the opinions of teachers, principals and ministry officials about the provision of adequate workshops and workrooms for the junior secondary school programme.	Null hypothesis retained $P<0.05$
HO_3	There is no significant difference in the opinions of teachers, principals and ministry officials about the provision of adequacy in the supply of teaching and learning materials in the JSS programme.	Null hypothesis was rejected $P>0.05$
HO_4	There is no significant difference in the opinions of teachers, principals and ministry officials about the funding of Junior secondary school programme.	Null hypotheses was retained $P>0.05$
HO_5	There is no significant difference in the opinion of teachers, principals and ministry of education officials about the fact the junior secondary school programme are not taught by qualified introductory teachers.	Null hypotheses was retained $P<0.05$
HO_6	The is no significant difference in the opinion of teachers, principals and ministry of education official about the implementation to the junior secondary school technical education programme.	Null hypotheses was retained $P<0.05$

CHAPTER FIVE

5.0 SUMMARY CONCLUSIONS & RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, the conclusions and the recommendations. Some recommendations for further research were also made. The major aspects of the study were summarised as followed:

5.2 Summary of the Study:

This study on the perceptions of the teachers, principals and ministry of education officials about the planning and implementation of the junior secondary school programme in Kaduna State, was conducted in order to find out the perceptions of these three groups of respondents on the planning and implementation of the junior secondary school programme in the state. The study was conceived because there was a general belief in the state that programme is not making adequate impact as was envisaged. Research questions and hypotheses were raised on such factors as availability of adequate workshop and workrooms, teaching and learning materials, well qualified technical teachers, funding and adequacy of planning and implementation of the programme. The study was limited to Kaduna State in scope and it is expected that the study will provide solutions at the problems that are presently facing the full realisation of the junior secondary school programme in the state.

Related literature reviewed centered on the origin and purpose of the junior secondary school in Nigeria, the state of technology in the nation, and provisions of the National policy on Education in relation to Technical education. The 6-3-3-4 system of education and its problems of implementation was discussed in detail. For Nigeria were also discussed in the review.

Chapter three centered on the research methodology. The populations, and samples used include: teachers, principals and ministry of education officials. Questionnaires were used un collection of data and the data were analysed using frequency, percentage and chi-square ANOVA - One way analysis distributions.

In chapter four, the research questions and the hypotheses were treated using the data collected. The results indicated that there is no significant difference in the opinions of the three groups of respondents on the provision of adequate workshops and workrooms as the three groups agreed that adequate workshop facilities were not provided in the schools. The respondents had different opinions on the provision of adequate funds, planning and implementation of the programmes. Well qualified technical teachers and teaching and learning materials were not provided. Six hypotheses were tested and null hypothesis on adequacy of workshops and workroom was retained. The three respondents agreed that workrooms are not adequate. Hypothesis two dealing with adequacy of teach of teaching and learning materials was rejected indicating a difference in the opinions of the three respondents. The null hypothesis on the adequacy of funding was retained as there were differences in the opinions of the respondents. There was difference in the opinions of the respondents on the qualifications of JSS teachers. The teachers and principals agreed that the JSS programme was poorly planned, while M.O.E. officials disagreed with this. The three respondents agreed that the implementation of the JSS technical education programmes were not well implemented in Kaduna state.

5.3 Conclusion

The findings of the study have revealed the following;

a. Differences in the opinions of the respondent groups in respect of the quality of the planning of the introductory technology programme of the JSS, with the administrators holding a positive view, while the principals and teachers hold a negative opinion. This differences in their opinion might have arisen due to the fact that principals and teachers are the implementers of the programme while the educational administrators are the planners and advisers on the JSS introductory technology programme.

b. With regards to workshops and workroom facilities are not adequate. This means that, student cannot acquire the practical skills which is the objective of the introductory technology programme.

c. Hypothesis three reveals, that there is a difference in the opinions of the teachers, principals and educational administrators in respect of the adequacy of the quality and quantity of teaching and learning materials.

Teachers and principals were of the opinion that the materials were not adequate; but the educational administrators were of the opinion that the materials were adequate. The few equipments that were supplied could not be mounted because there were no workshops and workrooms in most of the schools.

d. In respect of funding teachers and principals on the one hand stated that the funds provided were not adequate. While the educational administrators assert that adequate funds were provided to the schools. It should be pointed out here that adequate funding may be relative to size, conditions and the status of the school. For instance the special science schools in Kaduna State receive more financial attention from the government than the day junior secondary schools.

e. Further more the three groups respondents hold similar and homogenous perceptions about the adequacy of qualifications of introductory technology teachers with only 5% of the said teachers having the B.ed degree. All others having qualifications below the university degree and with 50% of them with N.C.E. certificates of introductory technology.

f. The respondent groups held different opinions about the level of implementation of the programme. The educational administrators feel satisfied, while the principal and teachers of introduction technology who are the actual implementers are skeptical and dissatisfied.

This finding is not surprising because earlier hypotheses have indicated that there were inadequate workshops spaces, funds, teaching and learning materials, and above all, lack of qualified teachers.

In view of these findings, the planning and implementations of the introductory technology programme in Kaduna State calls for a serious re-evaluation because technical education of which introductory technology is the focal point is the main bedrock for national sustainable development.

5.4 Recommendations

The state government should develop different strategies for financing the comprehensive secondary school programmes. The strategies should include surcharges on profits accruing to industries.

Policy statement should be made that funds set aside for technical education should not be diverted to other programmes.

The availability of such special technical education fund should encourage the purchase of locally produced equipment and materials that are necessary for the successful implementation of the schemes. This will also discourage the importation of complicated technical equipment from outside the country.

Both federal and state governments should take a second look at the planning and implementation of the programme at both the ministry and the school level. The aim of such will be to identify the weaknesses of the planning and the implementation of programme. One way of identifying the problems should be by studying the researches and the findings of the various studies on the planning and implementation of 6-3-3-4 system of education.

Adequate number of technical and vocational teachers as well as materials resources such as spacious workshops, workrooms and laboratories must be provided to ensure that we do a great deal better than we have done in the past. In the old secondary school system, lack of adequate and well - equiped science laboratories was responsible for the introduction of alternatives of practical in the senior secondary school examination. Lack of adequate workshop and sufficiently qualified technical teachers should not be allowed to affect the success of the junior secondary school programme.

Since the training of sufficient technical teachers may take a long time it may be advisable to employ indigenous technical personnel to be incorporated into the journal of the school system. As an interim measure the teachers should take their students to private organizations for practical lessons where facilities do exist. Six hours exposure weekly for a period of about one year will enable them to acquire skills of their talent and interest. This will enable them to be useful in the society that is bedeviled with a lot of unemployment.

5.5 Recommendation for Further Research

In the light of the findings of this study, the following recommendations for further research are advanced. A similar study of the planning and implementation of the junior secondary school programmes should be undertaken in the other states of the federation. The findings of such studies for the various states should be compared. The results of such researches will throw more light into the problems facing the successful implementation of the new junior secondary school programme nationwide.

Separate studies should be done on the various factors identified in this study such as funding, provision of adequate workshops and well trained technical teachers, planning and implementation of the 6-3-3-4 system of education in the different sates of the nation.

Bibliography

Abdullahi, Mohammed (1987). An Investigation of the Implementation of J.S.S. Pre-Vocational subjects in argungu LGA of Sokoto State. B.ED Thesis Zaria: Ahmadu Bello University.

Abdullahi Shehu (1994). The Implementation of J.S.S. Pre-Vocational subjects in Sabon-Gari Local Government Area. Unpublished B.ED Thesis Zaria: Ahmadu Bello University.

Abenga, F.M. (1989). "Evolving Strategies for Financing Vocational and Technical Education for the Effective Implementation of the 6-3-3-4 system of Education". A paper presented at the 1989 National Conference of NAEAP at Kaduna.

Aboki, Y. (1987). "The Training and Development of Technology and Technical Teachers for Nigerian Technical Institutions: Problems and Issues". A paper presented at the 10th anniversary Celebrations of National Board for Technical Education (NBTE), Kaduna NBTE.

Ade, Ojo M. 91989). Financing Technical Vocational Education in Nigeria. A Paper presented at the 8th Annual Conference of NAEP, Kaduna, Kaduna Polytechnic.

Adesina, S. (1977). Ogunsaju, S. (Edited) (1984). Secondary Education in Nigeria. Lagos: Academy Press Ltd.

Akinpelu, J.A. (1988). "Education for National Survival within Auster Economy". The Nigerian Principal Journal of ANCOPSS, Vol. 3, No. 1.

Aminu, Jubril, (1987). "A Literal Technological Landmark". An Address Delivered at the Opening of the New Secretariat Complex of NBTE, Kaduna NBTE.

Aminu, J. (1991). "Technical Education for National Development". Vanguard Newspaper, May 8, 1991.

Fagbemiye, E.O. (1982). The 6-3-3-4 system of Education: Implementations for Nigeria. A Paper presented at the fifth International Intervisatation Programme. Badagry: The Administrative Staff College of Nigeria. August 16-20, 1982.

Hassan, Ali (1986). The 6-3-3-4 Objectives Versus Students' Aspiration. PGED Thesis Zaria: Ahmadu Bello University, Zaria.

Hassan, I. (1982). Educational and Manpower Development. London : Bellmont Publishers Ltd.

Igwe, S.O. (1988) "The Concept of the 6-3-34 System of Educational and its implication for Nigeria" In Akpa, G.O. and Udoh, S.U. (edited). Towards Implementing the 6-3-3-4 system of Education. Jos: Electronic Press.

Kerlinger, F.N. (1966). Foundations of Behavioral Research New York: Pergamond Press Ltd.

Muktar, A.S. (1988) & 1989). Selected Speeches of the Military Governor of Kaduna State, Kaduna Government House.

Mukerjee, A. (1978). Educational Psychology Calcutta: Jonyata Basan Press.

Nduanya, M.O. (1986). Report on the realisation of Teacher Education Programmes in Anambra State. Enugu: Ministry of Education.

National Policy on Education (1981). Federal Ministry of Education.

Nigerian Educational Research Council (1980). Perspective of Qualities and qualities in Nigerian Education. Lagos: NERC.

Report of the commission on post- school Certificate and higher Education in Nigeria (Investment in Education) (Nigeria, Federal Ministry of Education, 1930)

Ashby Commission Report (1960).Federal Government of Nigeria. Lagos: Federal Government Press.

Bakare, C.G.M. 91984). 'The Place of Guidance and Counselling in the Implementations of the New National Policy on Education, The New Nigerian Principal Journal of ANSCOPSS, Vol. 1 no. 5.

Chukwuma, F.C. (1988) 'The fund-Raising Efforts of the School Head: Implications for the Implementation of the 6-3-34 system in Primary School'. In Akpa G.O. and Udoh, S.U. (Edited. Towards Implementing the 6-3-3-4 system of Education in Nigeria: Jos Tep Educational Series.

Edem, D.A. (1982). Introduction to Educational Administration in Nigeria. Ibadan: Spectrum Books Ltd.

Enyida, S.N. (1983). 'towards Establishing a Technical base'. New Nigerian Newspaper June 12.

Ezeocha, P.A. (1990). Education to Educational Administration and Planning. Nsukka: Optional Computer Solutions Ltd.

Fafunwa, A.B. (1974). History of Education in Nigeria. London:
George Allen & Unwin.

Fafunwa A.B. (1985). History of Education in Nigeria London: Lowe and Bryden Printers Ltd.

Fafunwa A.B. (1991). 'Basic Science to be Taught in Mother Language'. New Nigeria Newspaper Ltd., July 26, 1991.

Nwogwugwu, G.N. (19820. "Observation of the Operation of Some Junior Secondary Schools in Canada: Implications for Nigeria" A Paper presented at the 1982 National Conference of the Nigerian Association of Educational Administrators and Planners. Awka: Anambra State College of Education.

Obayi, Grace (1987). Nigerian polytechnic and Implementation of teh 6-3-3-4 Education system. A keynote Address to the National Workshop on Manpower Development in Nigeria and its Relevance to Science and Technology. Oko: Federal Polytechnic.

Ocho, L.O. (1976). School Administration and Management. Enugu: Fourth Dimension Publishers.

Ogbazi, N.J. (1987). Administration of Vocational Technical Education in Vocational Technical Institutions in Anambra and Imo States: A Paper presented at the National Conference of Technical Teacher Educators. Enugu: Anambra State.

Ogunbadejo, T. (1989). focus and Direction of Research in the Nigerian Polytechnic. A Paper presented at the Seminar in Technical Education. Kaduna: The Polytechnic.

Okonta, J. (1985). Polytechnic Programmes in Nigeria: An Evaluation. Educational Research Reports, Vol.14. No 1.

Olaitan, S.O. (1986). "Strategies for Reducing Finance Constraint on the Implementation of Vocational Technical Education in the National policy on Education". Journal of the Curriculum Organisation of Nigeria (CON). Special Series No.1.

Oloniye, S.O. (1989). The Economics of Technical Education in Nigeria. An Analysis of some key Issues. A Paper presented at the National Seminar on Technical and Vocational Education: Education and Training in Nigeria. Kaduna: Kaduna Polytechnic.

Olorunselu, R.O. (1989). "The Place of Introductory Technology in the JSS Curriculum in Nigeria". Nigerian Educational Forum. Journal of teh Institute of Education, A.B.U., Zaria.

Onahamiro, S. (1983). "Acquisition of Technical Education in Nigeria". New Nigerian Newspaper, March 10, 1983.

Third National Development Plan. (1975-80). Education and Social Services. Lagos: Federal Government Press.

Uche, U.W. (1986). Technical and Vocational and Education. Owerri: New African Publishers Co. Ltd.

Wajiga Afordia (1991). The Immunization of the Secondary School Curriculum of the New System of Education of 6-3-3-4 in Hong Local Government Area of gongola State. An Unpublished PGDE Thesis. Zaria: Ahmadu Bello University.

Appendix

QUESTIONNAIRE FOR MINISTRY OF EDUCATION ADMINISTRATORS AND TEACHERS ON THE PLANNING AND IMPLEMENTATION OF THE JUNIOR SECONDARY SCHOOL PROGRAMME IN KADUNA STATE.

Kindly respond to all items in this questionnaire by ticking ( ) your opinion in the appropriate box provided.

Key:
Strongly Agree = SA
Agree = A
Undecided = UD
Disagree = D
Strongly Disagree = SD

Thank you for your anticipated cooperation.

Deborah Lami Zakari.

Part One Personal Data of Respondents

1. Your highest Qualification :

(a) NCE Technical ( )
(b) B.Ed. Education ( )
(c) B.Sc. Education ( )
(d) B.Ed. Technical Education ( )
(e) M.Ed. ( )
(f) HND. ( )
(g) OND. ( ) (h) TTC ( )

2. Teaching Experience :

(a) 0 - 5 years ( )
(b) 6 - 10 ( )
(c) 11- 15 ( )
(d) Over15 ( )

Part Two Respondents' Opinions on the Planning and Implementation of teh JSS introductory Technology Programmes:

Questionnaire Items.	SA	A	UD	D	SD
(A) Adequacy of Materials and Equipment:					
1. The teaching and Learning of materials for JSS are good quality					
2. The materials are supplied in adequate quantity.					
3. The teaching equipment for practical work are supplied in adequate number.					
4. Most of JSS Teachers know how to use the available equipment.					
5. The teaching materials are locally made in Nigeria.					

Questionnaire Items.	SA	A	UD	D	SD
(B) Provision of Workshops and Classrooms:					
1. Large workshop are provided in the school for JSS programmes.					
2. The workshops are well equiped for JSS practical work.					
3. Spacious workrooms are also provided for JSS programmes.					
4. Large workshop are not available for JSS programme in my school.					

5. Large workrooms are not available for the JSS programme in my school. ____________________

6. Workshops are available but are not well equiped for JSS work. ____________________

(C) Availability of sufficiently qualified teachers

1. Many of the JSS teachers have University degrees in my school. ____________________

2. Few of the teachers have University degrees in my school. ____________________

3. My school does not have University trained teachers for the JSS work. ____________________

4. Majority of the JSS teachers in my school have OND and similar qualifications. ____________________

(D) Availability of funds for JSS Programmes:

1. Adequate funds are provided for the implementation of the JSS programme in my school. ____________________

Questionnaire Items.	SA	A	UD	D	SD
2. Adequate funds are not provided for the JSS programme in my school.					
3. Provision of fund for the JSS programme is irregular.					
4. Provision of fund for the JSS introductory technology subjects					

5. Funds are not provided for the implementation of the JSS practical. ______________________

(E) Planning of the JSS programme

1. The JSS programme is adequately planned in my school. ______________________

2. The JSS Programme is well planned with esteem in my school. ______________________

3. The JSS Programme should have been planned in a better way. ______________________

4. Adequate number of well sufficiently qualified teachers are provided for the JSS Programme. ______________________

5. Equipped workshops and workrooms are provided for the JSS programme in school. ______________________

6. The JSS programme is averagly financed in my school. ______________________

7. Teaching and learning materials are adequately provided for the JSS programme. ______________________

Questionnaire Items.	SA	A	UD	D	SD
(F) Implementation of the JSS programme:					
1. The JSS pragramme is implemented in my school.					
2. The JSS programme feature in my school.					
3. Adequate time is given to workshop and workroom and practical activities in the school.					
4. Many teachers concentrate on theory rather than on practical work for JSS classes.					
5. The JSS teachers are not sufficiently qualified to teach introductory technology in my school.					
6. The students are not interested in the practical work.					