IMPACT OF FUNDING IN THE MANAGEMENT OF TECHNICAL EDUCATION IN NORTHWEST ZONE OF NIGERIA

By

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DEDICATION

This thesis to the Glory of Almighty Allah is dedicated to my two beloved parents (Late) Alhaji Ado Hussain (Sakatare) and Mother Hajiya Khadija Ado may Allah be pleased with them and bestow his rahma on them for encouraging and supporting all the children to seek for knowledge at all times. To all my family for supporting and standing by me during the trying times of this course particularly Saudat Abdullahi Kabir, Surayya SalisuKabir, Mujahid Umar, Adamu jnr, Nafisat, Khadijat, Hafsat, Abdulaziz and Aliyu Kabir. May Allah bless them.

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ABSTRACT

This study examined issues pertaining to the impact of funding in the management of technical education in the northwest geo- political zone of Nigeria. The study was based on descriptive survey research. The population of the study comprised of all technical educators from the seven states of the northwest zone of Jigawa, Kano, Kaduna, Katsina, Kebbi, Sokoto and Zamfara States, under the management of Science and Technical Schools Boards (STSB)of the states. All the seven Science and Technical Schools Boards and the twenty seven (27) technical schools under the boards were selected as the population of the study. All the seven (7) administrators from each of the seven (7) boards, all the twenty nine (29) technical teachers, principals and vice principals of the 27 technical schools were part of the population totaling 832 subjects. Samples were drawn using the research advisor 2006 table, where the population of 832 subjects approximate 288 sample subjects. However to make the samples larger so as to ensure wider coverage of all states, additional samples of 167 subjects were selected to make a total of 455 participants drawn from about 50% of the technical schools in the northwest zone. The instrument used for data collection was a self-developed questionnaire titled questionnaire on funding and the management of technical education QFMTECH, which was validated by experts on test and measurement from the department of education, Bayero University on face validity process. The reliability of the instrument was established through a pilot study conducted using the test- retest method and Pearson product moment correlation statistical tool was employed to calculate the reliability, arriving at reliability co-efficient of 0.75 and the instrument was adjudged reliable for administration. The questionnaire was administered to the 455 sampled participants and the data collected were analyzed using descriptive statistics and the hypotheses were tested inferentially using Pearson moment correlation. The result of the analyses showed that the funds provided for the management of technical education in the northwest geopolitical zone of Nigeria are grossly inadequate. Also there is dearth of provision of infrastructural facilities for the management of technical education in the zone which jeopardized the attainment of the objectives of this vital system of education. Similarly funds provided for the procurement of tools for practical works in the technical schools of the zone are inadequate and this negatively affected practical works in most of the workshops in the schools under the study. Staff development programs in the form of seminars and workshops are only periodically organized for the teachers of technical schools in the zone understudy, thus sufficient funds are not provided for that purpose. Local communities such as PTAs, Old Students Associations and the likes have not made significant contributions financially or through the maintenance of infrastructures, provision of teaching materials or sponsoring of teachers on in-service, which would have assisted towards the effective management of technical education in the northwest zone. It is based on these findings that recommendations to the governments of the northwest zone were made, such as increase in the funding allocated to the technical education sector, provision of additional infrastructures, effective programs on teachers development and welfare, creation of public awareness on the importance of technical education and the possibility of incorporating public private partnership (PPP) in the management and the development of technical education. This will reposition technical education in the northwest zone.

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LIST OF ABBREVIATION

AIDS - Acquired Immune Deficiency Syndrome

ETF	**-**	Education Trust Fund
FGN	**-**	Federal Government of Nigeria
FRN	**-**	Federal Republic of Nigeria
GNI	-	Gross National Income
H.O.D	-	Head of Department
MDGs	–	Millennium Development Goals
NABTEB	**-**	National Business and Technical Examination Board
NPE	**-**	National Policy on Education
OECD	–	Organizations of Economic Cooperation and Development
PPP	**-**	Public Private Partnership
PTA	-	Parent Teachers Association
PTDF	_	Petroleum Trust Development Fund
QFMTECH	**-**	Questionnaire on Funding and the Management of Technical Education
SIWES	-	Students' Industrial Working Experience
SPSS	-	Statistical Package for the Social Sciences
STSB	**-**	Science and Technical Schools Board
UK	-	United Kingdom
UN	–	United Nation
UNESCO	**-**	United Nations Educational and Scientific Organization
USA	-	United State of America
USAID	–	United State Agency for International Development

OPERATIONAL DEFINITION OF TERMS

This section defined some terms as they may be applied in this study.

1. Technological advancement – Development, positive changes and progress in technological breakthrough or inventions.
2. Science and Technical Schools Board – a parastatal established by the State Governments to fast track the development of the states in the field of Science and Technology at the Secondary Schools level and provide sufficient manpower in those fields.
3. Invest: to spend money on government programmes such as Technical education in order to make it better or more successful.
4. Unemployment: state of not having a job or means of livelihood by a citizen of a nation or state.
5. Technical Colleges: Colleges at the Secondary School level where students study mainly engineering and related subjects that are skilled oriented.
6. Industrialization: where a country in industrialized or have industries that enhance its Technological and Economic development.
7. Northwest Zone: The Northwest Zone comprises the geopolitical area of Nigeria that covers the States of Kano, Kaduna, Katsina, Kebbi, Sokoto, Jigawa, and Zamfara States located on the Northwestern part of Nigerian map.
8. Development: The index of evaluating the management of Technical Education in the Northwest Zone according to this dissertation is the adequacy of infrastructures, availability of teaching material, tools and other facilities necessary for effective teaching and learning of technical subjects and the number of technical schools available.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

This study sought to examine the impact of funding on the management of Technical Education in the Northwest Zone of Nigeria. It is aimed at analyzing the adequacy of investment made in the area of Technical Education by the Governments of the Northwest Zone in order to provide the necessary foundation for the Technological advancement of the zone.

The research will also examine the contribution of community and international organizations toward the funding of Technical Education in the Northwest Zone.

Technical Education is described by the National policy on education (FRN 2004) as "the study of technologies and related Sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of the economic and social life. By extension, Technical Education aimed at providing skills and knowledge that would enable graduates of Technical Schools to be employable, self employed or develop the foundation of becoming Engineers in any of the engineering fields and contribute positively to the community and other sectors of the National economy, which will fast tract the technological development of the Northwest zone and the country in general. These necessitate its adequate funding for effective management.

In the same vein, Ugwaja (2010) view Technical Education as that aspect of education design to prepare students for industry, agriculture, commerce and home economics which is usually provided at senior secondary or lower tertiary level. In line with the above option this study is based on impact of funding in the management of technical education at senior secondary level

in the Northwest Zone. This is with a view to determine its adequacy or inadequacy for effective management.

Similarly, Technical education can also be seen as that education design to prepare individuals for gainful employment as semi skilled or skilled workers or technicians or sub-professionals in recognized occupations and in new emerging occupations or to prepare individuals for enrolment into advanced technical education programme. It could therefore be explained in terms of training, designed to advance an individual's proficiency in relation to his/her present or future occupation, training or re-training. It is also a systematic training, which is designed to fit individuals in to recognized educations. It is therefore appropriate to determine whether adequate funding is provided for its proper management.

In the opinion of this researcher, full participation of indigenes of the Northwest Zone into Nigerian society requires technical education at all levels of our educational system, which will expose them to different skills and abilities and give an equal opportunity to all children from the zone to prepare them for work and full participation in national life. The Government of the Northwest therefore needs to effectively fund the technical education to achieve these objectives.

This observation motivated the effort of this researcher to examine the adequacy or inadequacy of funding on the management of Technical Education in the Northwest Zone of Nigeria, hence, the decision to examine the impact of funding in the management of Technical Education in the Northwest Zone of Nigeria.

1.2 Statement of the problem

In Nigeria Educational set up, the burden of educational funding is completely dependent on government allocation to the education sector. Against this background, some major problems

are bound to be encountered in the effective funding and management of Technical Education because of the nation's economic regression as well as its dependence on government budgetary allocations.

Technical Education is a capital intensive venture that requires adequate funding for its successful implementation and management. The adequacy or inadequacy of funds provided affects its proper implementation and effective management. This has led various stakeholders to clamour for more funds to be allocated to the sector so that the desired technological advancement required in the country could be achieved. Osayomwanbor and Edokpayi, (2008) observed that:

> "The educational system needs a thorough re-examination and x-ray. The education we need in this 21st Century is an education that will provide answer to the nation's problems economically and technologically"

Jen, (1996) portends that "education is an investment in the national development". The technological development of a country is dependent on its technological education. It is with this consideration in mind that this researcher was motivated to examine the impact of funding in the management of Technical Education in the Northwest Zone. The focus is on the adequacy of funds the states have invested in Technology Education and its impact on effective management as well as the level of development recorded.

The researcher was also motivated to make the investigation because of the present dwindling economic situation and the poor economic climate in the country which have resulted in massive unemployment of both the youth and adults, emphasizing the need for every Nigerian to strive for self reliance through self-employment. This may have resulted in calls for the need to redesign the existing process of management, planning,investment and development of Technical

Education so as to make immediate impact in national industrial emancipation and enhancement of socio-economic status of our youths, Aminu (1997) posited that:

> "Vocational/Technical Education provides access to technology and Increase industrialization of both rural and urban communities for the purpose of reducing dependency and thus improving economic and political status of a nation."

Therefore, the level of funding provided for Technical Education will underline the seriousness of the Northwest governments towards technological advancement of the Zone.

The reseacher believes that effective funding of Technical Education may enable the states to execute the much advertised poverty alleviation programmes and meet the millenium development targets of providing employment for the teaming unemployed youths in the Northwest Zone of Nigeria. It is against this background that this study would be conducted to analyze the impact of funding in the management of Technical Education in the Northwest of Zone Nigeria.

The management of Technical education seems to be facing different problems in Nigeria in particular and the Northwest Zone in general as a result of ever increasing cost of facilities required for managing and maintaining its programmes. Again, one observed that fund allocated to this sector by the state governments of the Northwest Zone is grossly inadequate to effectively run the programme. Besides, it is assumed that the administrators of the Science and Technical Schools Board viewed it unreasonable to collaborate with other sources to supplement government's grant. Similarly, communities, private organizations and other stake holders have not deemed it fit to invest in the management of Technical education, despite its innumerable benefits to the economic well-being of the society. It is based on these assumptions that the researcher was motivated to enquire into the issue of the impact of funding in the management of

Technical education in the Northwest Zone, with the aim of suggesting solutions to some of the assumed problems.

1.3 Objectives of the Study

The study intends to achieve the following objectives:

1. To examine the adequacy or inadequacy of funds provided for the management of Technical Education in the Northwest Geo-political Zone of Nigeria.
2. To determine the adequacy or inadequacy of the provision of infrastructural facilities for the management of Technical Education in the Northwest Geo-political Zone of Nigeria
3. To determine the adequacy or inadequacy of funds provided for the procurement of tools for practical works in the Technical Schools of the Northwest Geo-political Zone of the Country
4. To find out whether or not sufficient funds are provided for Staff development programmes in Technical Schools of the Northwest Geo-political Zone of the Country,
5. To examine whether or not communities participate in the provision and management of Technical Education in the Northwest Geo-political Zone of the Country

1.4 Research Questions

The study sought to answer the following questions:

1. Are adequate funds provided for effective management of Technical Education in the Northwest Geo-political Zone of Nigeria?

2. Are there adequate provisions of infrastructural facilities for effective management of Technical Education in the Northwest Geo-political Zone of Nigeria?
3. Are adequate funds provided for the procurement of tools for practical works in the Technical Schools of the Northwest Geo-political Zone of the Country?
4. Are sufficient funds provided for Staff developmental programmes in Technical Schools of the Northwest Geo-political Zone of the Country?
5 Do communities participate in the provision and management of facilities for the effective management of Technical Education in the Northwest Geo-political Zone of the Country?

1.5 Research Hypotheses

HO_1 There is no significant relationship between the funds provided for the management of Technical Education in the Northwest Geo-political Zone of Nigeria and the provisions of infrastructural facilities in the zone.

HO_2 There is no significant relationship between the funds provided for the management of Technical Education in the Northwest Geo-political Zone of Nigeria and the procurement of tools for practical works in the zone.

HO_3 There is no significant relationship between the funds provided for the management of Technical Education in the Northwest Geo-political Zone of Nigeria and the staff developmental programmes in the zone.

HO_4 There is no significant relationship between communities participation and the provision and management of facilities for the management of Technical Education in the Northwest Geo-political Zone of the Country.

1.6 Significance of the Study

This study was embarked upon in order to examine the adequacy of funding by the governments of the Northwest Zone to the Science and Technical Schools Board for the effective management of Technical Education programmes in Senior Secondary level Technical Schools in the zone. This is x-rayed in terms of provision of infrastructural facilities, machineries, tools, materials, adequate and qualifies teachers and effective staff welfare in relation to the development recorded.

The study would particularly provide some impetus for both the Federal and State governments in the realization of the significance of Technical Education in the Technological development of the country and Northwest States in particular; the training of necessary skilled manpower required in industries and the training of entrepreneurs for self-reliance and employment, hence the need to allocate adequate funds towards its management.

The suggestions from the study would significantly improve the funding of Technical Education by highlighting areas of strength and weakness of managing Technical Education programmes in the Northwest Zone of Nigeria, particularly the funding aspect.

The suggestions of the study would also enable governments and other Educational agencies interested in effective management of Technical Education for sustainable development and provision of skills for self-reliance, poverty alleviation and self-employment to develop more effective strategies of adequately funding the Technical Education system for the economic progress of the Northwest States of Nigeria and therefore provide adequate funds for its proper management in the Northwest Zone.

The suggestions would also enable the Northwest State Governments to fully incorporate Technical Education in their poverty alleviation programme and other millennium development

goals (MDGs) aimed at developing self-reliance to the teaming population of youths in the Northwest Zone of Nigeria.

1.7 Scope and Delimitations of the Study

The study is basically concerned with the impact of funding in the management of Technical Education in Northwest Geo-political zone of Nigeria, as such funding and management of other educational programmes in the zone were not covered by the study. Similarly the funding and management of Technical Education in other Geo-political zones of the Country did not form part of the study. Furthermore the study was limited to the Secondary level Technical Education in the Northwest States of Nigeria, as such tertiary Technical Education offered by Higher Institutions of learning such as polytechnics, Universities and other higher Institutions in the zone were not covered by the study.

The study is narrowed down to the impact of funding, because of its significance to the management of any educational programme, particularly Technical Education that requires expensive machineries, tools and teaching materials.

The analyses would be centered at the Science and Technical Schools Boards, which were established by governments with the responsibility of funding and managing Science and Technical Education in various states of the Northwest Zone at the post primary schools level.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 **Introduction**

This chapter presents a review of literatures that are in line with analysis on the impact of funding in the management of Technical Education. The review of related literature is an exercise in which the researcher tried to identify, locate, read and evaluate previous studies, observations, opinions and comments related to his intended research. Olaofe, (2010) observed that, "the major reason for the undertaking of review of related literature is to document what has been done in the area of research and determine areas of strength and weakness of the treatment so far in the field of study and bring out loopholes that justify more work in the area. It should also highlight the areas that can be rejected outright, identify areas to be modified and utilized in the theoretical framework and methodology of analytical procedure of the present day". This chapter shall therefore discuss existing literature related to the impact of funding in the management of Technical Education in the Northwest Zone of Nigeria.

2.2 Theoretical Framework

A study that is concerned with the impact of funding in the management of an educational programme, such as this could be structured around a number of management theories. Management theories can be seen as a jungle of theories, thus there are great number of theories/ scholars developed in organizational management which could be observed later, related positively to the main focus of this study. Theories such as scientific management theory, human relations theory, theory X and Theory Y and administrative management are all related to this study. The scientific management theory as observed by Bello (2014) was developed by Fredrick Winslow Taylor (1856-1917) who is generally regarded as the pioneer of the theory. He was

born in Boston and worked for many years in Midvale Steel Works Company in Philadelphia. He started as an ordinary labourer working with machines and gradually rose to managerial position as chief engineer. The major postulations of Scientific Management Theory are:

1. To ensure efficiency and productivity of organizational workforce, there must be deliberate and systematic decentralization of work-rate on daily basis. By extension this principle is saying that for employees to be productive, each and every one of them should be assigned to clearly define task to be accomplished on daily basis.
2. Productivity of employee should be rewarded and un-productivity punished. That is to say a worker who strives hard and therefore accomplishes the tasks required of him should be rewarded materially. And that who fails to perform his job as expected of him should be denied of such reward. These, according to the principle will motivate employee to be more productive. In short material reward increases employee's productivity.
3. Each segment of operation in organization should be devoid of rule-of-thumb and adopt scientific approach. Thus, for workers to successfully accomplish their tasks, they should be educated on how to apply scientific method in their area of operation.
4. Recruitment, selection, placement and development of workforce should be scientific. As such personnel management section of the organization should always base appointment and placement of employees in accordance with area of specialization.
5. Conducive working environment accelerates the productivity of organizational workforce. This by implication means that cordial working relationship between the management and employees should exist in the organization, perhaps because instability and rancour could lead to, not only decreasing workers' productivity, but also to total dismemberment.

So, taking the above postulations in to account one could perceive that vocational and technical

schools as organizations could benefit tremendously from the above assumptions of the theory in many ways for the effective management of this system of education. As the theory touches areas that have to do with personnel management, cordial relationship between managers and subordinates of the organization and staff utilization, it is no doubt applicable in managing technical and vocational Schools. It also portrayed the impact of funding in the effective management of Technical education as all the outlined processes are based on adequate funding.

Such School managers could successfully manage curriculum implementation, by making sure that subject allocation to teachers is based, strictly on area of specialization. As such no teacher in the technical and vocational schools should be assigned to teach a subject outside his discipline. Similarly, the principle also applies to placement of supporting staff in the technical and vocational schools. A school financial staff for example should not be asked to teach except if he has teaching qualification. Delegation of authority and right to make decision should also be decentralized based on experience and expertise. Furthermore, as the theory dwelt on mutual cooperation between staffers and management, the head teacher in technical and vocational school organizations as well as his lieutenants should devise a means through which peace and stability should prevail in the school. This could be achieved if the channel of communication in the school is sound and effective. In the same vein, the rules and regulations governing mutual coexistence in the school should be respected by all, right from the top managers down to the students and the ranks and files employees in the school. And in order to avoid redundancy which according to the theory jeopardizes the productivity of employees, school time-table and daily duty rosters of academic, non-academic as well as supporting staff members should be well designed to engage both the staff and students in clearly defined activities. On the issues of material reward, the principals of Technical and Vocational Schools should try as much as

possible to see that promotion of staff members, annual increment as well as other benefits are processed promptly when due, this is where effective funding plays a significance role. Additionally, on the idea of avoidance of traditional ways of operation, otherwise referred to as rule-of-thumb in the theory, the principal could put in place possible means of professional development of teachers and other members of staff, whose duties require professionalism by means of organizing seminars, workshops and conferences. Thus, adequate funding is required for effective staff development, recruitment and placement of qualified teachers as highlighted in this write-up on the impact of the funding in the management of technical education in the Northwest zone of Nigeria.

2) Human Relation Management Theory according to Campbell (1999) recognizes the importance of every individual and small group in the organization and involves them in the formation of policies hoping to enhance smooth implementation and commitment. The theory according to Nwachukwu (2007) is the brainchild of Elton Mayo and associates from the Harvard University who conducted series of studies at the Hawthorne plant of the Western Electronic Company. The purpose of these studies was to determine the effect of illumination on employees' productivity. It is from the outcomes of the studies that the main assumptions of the human relation theory were developed. These assumptions as summarized by Bello (2014) are as follows:

1. Man as a social animal would not be productive if deprived of the innate tendency to associate with others. Therefore, for a man to be productive in whatever duty he undertakes in the organization, his social relations should be encouraged. In other words, employees are more productive in groups than in isolation. In this light therefore, organizational management should not discourage establishment

of informal group and other associations within the organization. This is because 'work is a social activity', just as maintained by the theory.

2. Although workers can be motivated by material reward, but that would not be the only determinant factor for their productivity, rather, factors such as welfare and psychological satisfaction could, in addition to material reward propel employee output. By extension the principle is adopting for welfare services to be added to material reward, which implies that, even if material reward is put in place, the productivity may be low, if welfare is not catered for.
3. Team work is more productive than individual work. In this regard, the organization structure should be designed in such a way that division of labour and delegation of authority would be based on groups rather than individual.

The theory without any doubt presents postulations that can be applied in the management of Technical and Vocational School Organizations. Technical School managers could no doubt apply some of the assumptions of human relation theory in a number of ways and manners. In the first place, they should encourage both staff and students to fully participate in the school-based club and societies. Such association should be encouraged in order to satisfy the innate needs of social interaction, hence adequate funding required to provide necessary facilities that will promote team work.

Still on the issue of group spirit, school management should organize from time to time team-teaching, which apart from satisfying the staff needs of working in group is also identified as a method via which students' thinking horizon is widened. Similarly, teachers should be encouraged to patronize grouping students for works in the classroom, so that they can know how to share ideas and exchange views. With regard to school structure, it should be designed

along the committee system in order to tap from the vast experiences staff members are in possession of. Other areas in which the theory can be applied include provision of essential welfare services in the school, such as decent accommodation, healthcare services for both staff and students (and of course their families), job security, transportation and the likes. Albeit the fact that some of these are beyond the powers of public school managers, yet effort should be made to draw the attention of state ministry of education or school board in that respect. Hence this study identified the provision of adequate staff and students welfare which could only be provided where there is adequate funding. This motivated the examination of the impact of funding in the management of technical education in the Northwest zone of Nigeria.

3) Closely related to human relations management theory are the Theory X and Theory Y developed by Douglas McGregor as stated by Stewart (2010) in his hugely influential 1960 book, *The Human Side of Enterprise* (McGraw-Hill), McGregor made the simple yet powerful observation that managerial practice often expresses some very deep assumptions about the nature of human beings. Two competing theories about human nature he claimed, dominated the managerial thought-world. Theory X says that the average human being is lazy and self-centered, lacks ambition, dislikes change, and longs to be told what to do. The corresponding managerial approach emphasizes total control. Employee motivation, it says, is all about the fear and the pain. Theory Y maintains that human beings are active rather than passive shapers of themselves and of their environment. They long to grow and assume responsibility. The best way to manage them, then, is to manage as little as possible. Give them water and let them bloom, say the Y-types. Douglas McGregor, who was an American social psychologist, developed these two opposing theories which are still referred to commonly in the field of management and

motivation. While more recent studies have questioned the rigidity of the model, McGregor's X-Y Theory remains a valid basic principle from which to develop positive management style and techniques. McGregor's XY Theory remains central to organizational development, and to improving organizational culture. McGregor's X-Y theory is a salutary and simple reminder of the natural rules for managing people, which under the pressure of day-to-day business are all too easily forgotten. McGregor's ideas suggested that there are two fundamental approaches to managing people. Many managers tend towards theory x, and generally get poor results. Enlightened managers use theory y, which produces better performance and results, and allows people to grow and develop. McGregor's ideas significantly relate to modern understanding of the Psychological Contract, which provides many ways to appreciate the unhelpful nature of X-Theory leadership, and the useful constructive beneficial nature of Y-Theory leadership. The main assumptions of theory X are:

- The average person dislikes work and will avoid it if he/she can.
- Therefore most people must be forced with the threat of punishment to work towards organizational objectives.
- The average person prefers to be directed; to avoid responsibility; is relatively un-ambitious, and wants security above all else.

Theory Y on the other hand assumes that:

- Effort in work is as natural as work and play.
- People will apply self-control and self-direction in the pursuit of organizational objectives, without external control or the threat of punishment.
- Commitment to objectives is a function of rewards associated with their achievement.

- People usually accept and often seek responsibility.
- The capacity to use a high degree of imagination, ingenuity and creativity in solving organizational problems is widely, not narrowly, distributed in the population.
- In industry the intellectual potential of the average person is only partly utilized.

The implication of these theories to the management of Technical Education is that the principals managing such schools who are responsible for the management of personnel working in the schools, would find the assumption as potential guide which could provide them with the knowledge of different types of people working in the schools who may either have positive or negative attitude to work. As such the manager would apply different approaches in relating with different subordinate. Same is applied if the organizations differ as pointed out by Weihrich, Cannice and Koonntz (2011) saying that the effective manager recognizes the dignity and capabilities, as well as limitations, of people and adjusts behavior as demanded by the situation. The writers also observe in discussing the implications of the two theories that the variety of tasks and situations requires different approaches to management. This study identified the need for training and retraining of management officers on modern approach to school management as frequently as possible which could only be achieved if there is adequate funding that would enable the provision of such training. Therefore, this study intends to examine the adequacy of funds required for the training and retraining of staff in the technical schools in the Northwest zone. Thus the study wishes to examine the impact of funding in the management of Technical education in the Northwest Zone.

4) Administrative management theory was developed by a French mining engineer in person of Henri Fayol (1841-1925) and was later assisted by two other management scholars James D. Mooney (1884-1957) and Luther G. Gulick (1892-1993). The theory is made up of 14 principles of management and was developed concurrently with the scientific management theory, but differs with the scientific theory in the area of concentration. That is to say that while scientific management theory concentrates on operational component of the organization (i.e. the workers), the administrative management on the other hand places much emphasis on management i.e. top management.

Generally speaking, the 14 principles of management the theory are;

1. Division of labour
2. Authority
3. Discipline
4. Unity of command
5. Unity of direction
6. Subordination of individual interests to the general interest
7. Remuneration
8. Centralization
9. Scalar chain
10. Order
11. Equity
12. Stability of tenure of personnel
13. Initiative and
14. Espirit de corps

Apparently the effective management of technical education could be enhanced if the above principles are applied. The organization and management of this system of education should be based on these principles to make sure that the tasks are divided among the staff members based on their area of specialization. Similarly, the principles of unity of command, unity of direction, order and discipline are needed in making the social and physical environment of technical schools conducive for teaching and learning. In the same vein, the management should ensure prompt payment of staff salaries and all other fringe benefits. This is where adequate funding impacted on the management of Technical education. However, it is relevant to observe here that these principles are not rigid as pointed out by Weihrich et al (2011) that those principles are flexible, not obsolete, and must be usable regardless of changing conditions. This study observed that the prompt payment of salaries and allowances are necessary factors that would motivate technical teachers and other support staff to put in their best towards achieving the organizational goals of technical education in the Northwest zone, and could only be achieved if technical education is adequately funded. Hence the intention of the researcher is to examine the impact of funding in the management of technical education in the Northwest zone of Nigeria.

5) Another management theory that related to this study is the system theory. Technical education as an organized programme could be seen as a system, thus related to system approach just as observed by Weirich, Cannice and Koontz (2011) saying that "an organized enterprise does not, of course, exist in a vacuum, rather, it is dependent on its external environment; it is a part of largest systems, such as the industry to which it belongs, the economic system, and society. Thus the enterprise receives inputs, transforms them, and exports the outputs to the environment". Technical Education which is the main concern of this study can also be seen as a

system that is part of educational supra-system, which receives input in many forms including the students who are the subject of the processing and export them to the society as well trained educated manpower. It is against this background that the System theory is deemed more relevant to this investigation. In fact Hjorland and Nicolaisen (2005) opine in this relation that, "Systems theory exists in different versions and is related to some other fields. A system from the management perspective can be seen as a whole consisting of interrelated parts technically referred to as subsystems. For a system to function effectively, all its subsystems have to work harmoniously, and that any dysfunction experienced in the subsystem could affect the entire system i.e. the supra-system. Like in any other disciplines, system in management is related to organizational input, processing and output. The input is consisting of raw materials, infrastructural facilities, financial and human resources. It is this input that is managed by the organizational managers to process or convert the input into products that are released as output".

A system is a set of *related components* that *work together* in a particular *environment* to perform whatever *functions* are required to achieve the system's *objective*, it is also concerned with the relationship and impact of the input on the quality of both the processing and the quality of the output. As such an analogy could be driven here to say that, the higher the quality of the input, the higher the quality of the output. Thus the adequacy of funds invested in the educational system such as the Technical Education, could positively relate to the quality of the products of the programme. Hence the decision to investigate the impact of funding in the management of Technical education in the Northwest Zone of Nigeria.

Laszlo and Krippner (1997) view in this relation that "General system theory, like other innovative frameworks of thought, passed through phases of ridicule and neglect. It has

benefited, however, from the parallel emergence and rise to eminence of cybernetics and information theory, and their widespread applications to originally quite distant fields".

Generally speaking a system theory can be seen from the perspectives of Mala (2010) who explained that "A system is a collection of interrelated parts acting together to achieve some goal which exists in the environment". Also, system is defined as a set of objects working together with relationships between the objects and their attributes related to each other and to the environment. Therefore, system in simple terms in respect to management is a set of different independent parts working together in interrelated manner to accomplish a set of objectives. Organization as a System receives Input, transforms it through a Process for Output and Operates in an Environment (economic, regulatory and other forces) Elements of Systems Approach in organization is a unified and purposeful system consisting of several interconnected, interacting and interdependent parts. The parts of a system are called sub-systems. Each sub-system influences the other sub-systems and the system as a whole. The position and function of each sub-system can be analyzed and understood only in relation to other sub-systems and to organization as a whole. Each sub-system derives its strength by its association and interaction with the other sub-systems. As a result the collective contribution of the organization is greater than the aggregate of individual contributions of its sub-systems. This is known as synergy. Each system has a boundary that separates it from its environment. The boundary determines which parts are internal to the organization and which are external. For example, employees are within the boundary and creditors; customers are external to a firm. Conclusively Technical education is a subsystem of the larger educational system. For the sub system to function effectively, alternative funding is one of the major inputs required. Hence this study is to examine the impact of funding in the management of Technical education in the Northwest Zone.

2.3 Conceptual Framework

Technical Education as a concept has been given a great number of interpretations by many scholars, to the extent that one could hardly arrive at a universally accepted interpretation of the concept – Technical Education. However a review of some of the definitions would for sure shade light on what technical education stands for Uwaifo (2009) opines that Technical education deals with the training of technical personnel for the purposes of initiating, facilitating and implementing the technological development of a nation and also to create the basic awareness of technological literacy to our youths.

Technical Education is described by National policy on education, (FGN 2004) as "the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge, relating to occupation in various sectors of the economic and social life". By this assertion, Technical Education is aimed at providing skills and knowledge that would enable graduates of Technical Schools to be employable, self-employed or develop the foundation of becoming specialists in any of the engineering fields and contribute positively to every sector of the economy, which will fast track the technological development of the country. This importance necessitates a study into the funding aspect; hence the examination of funding in the management of Technical Education as it will portray how much investment is required towards the provision of this all important social service to the citizens.

Ugwuja, (2010) stressed that "Technology has become a critical factor for economic and social development, as it is through its application that human and natural resources of a country or state could be transformed into goods and services, for better quality living of its citizenry". The need to develop Nigeria's abundant natural resources is enough motivation to undertake a study in to the process of development and disseminating Technical Education, particularly the funding

aspect. This is because of the importance of Technical Education to the development of any nation. However, the question remained whether the Nigerian government has realized the position of Technical Education in National development? Manpower deficit particularly in the technologically related sectors of the nation's economy such as industries, schools, oil and gas sectors and the power sectors are clearly manifested in Nigeria, as foreign nationals continue to manage our construction industries, oil and gas exploration and industrial production, lack of locally fabricated machineries and spare parts and where they are available, their poor standards have often draw the nation's development backwards. These identified failures motivated the researcher to seek answer to pertinent question relating to the funding of Technical Education in the Northwest Zones of Nigeria. Technical Education accounted for over 60% of total educational contribution to the national economic growth and that vocational and Technical Education play a critical role in the training of skilled youth for National development, this position becomes absolutely clear at the wake of the Nigerian enterprises promotion decree of 1972, when the problem of inadequate manpower to replace aliens become an issue This observation shows the critical role of Technical Education in National development in order to bring about the technological development of the country and the Northwest Zone of the country in particular. Technical Education can help to increase productivity in food, energy, generate employment and increase per capital income and at the same time improving the livelihood of greater part of the population. Aworanti (2012) noted that "it is a fact universally acknowledged that Technical education is a pivot on which the wheel of sustainable technological development revolves, but the nation until recently did not accord technical education the desired priority. This view signifies the importance of Technical Education to the development of any society, the Northwest Zone inclusive. However, despite all these values, has Technical Education received

commensurate investment from governments, private organizations and the society in the Northwest Zone, who are the consumers of the products from the Technical Education system. Again the critical role of Technical Education in National development could not be overemphasized, with Technical Education, advancement is quick with faster results while greater productivity is achieved. With this education, the entire country will ultimately be having much benefit and be at a far better position to manage and sustain environment with this assertion Aworanti (2012) stated that "Government must show more commitment to better funding and management of our Technical and vocational Institutions. With the Northwest Zone being one of the most backward in the country economically and environmentally, with constant environmental challenges from the Sahara desert prone to drought and over reliance on subsistent farming; studies such as this are necessary in order to expose alternative ways of developing the region and draw the attention of state governments of the zone on alternative solution to some of their problems. The role of Technical Education in National development is further elaborated by Nyesom, (2012), who expounded that "The Federal Government will invest in Technical and Vocational Education to create about one million jobs, as government is more committed to empowering the growing population of unemployed Nigerian youths to enable them contributes meaningfully to nation development". With this assertion, from the Minister of Education, it could be assumed that the Federal Government is gradually coming to terms on the need to fully integrate Technical Education in its development plan because of its significance in providing employment to the teeming populace, therefore the expectation is for government to move adequate funds towards the provision of necessary infrastructure, building of more Technical Schools, recruitment, training and retraining of more Technical Teachers in order to actualize the policy. Similar stance was taken by Kano State and other state governments as

according to Yangora, (2005), Kano State Government felt it necessary to move with time and besides, if the state could move forward technologically, there must be the need to educate its indigene scientifically, like is done in other states of Nigeria. The state therefore established Science and Technical Schools Board with (STSB) the following objectives:

a) To provide Science and Technology Education at post-primary school level

b) To provide Vocational Education for the training of artisans and craftsmen.

c) To set up fund, manage and develop Science Secondary Schools, Technical Colleges and Vocational Centers. (Kano State Ministry of Education, 1983; p53)

By the above action, Kano state and other states of Nigeria (including the other 6 states that formed the Northwest Zone), having realized the critical position of Technical Education in the development of their states, separated the sector from the Ministry format and set up a special board that will fund and manage the Science and Technical Schools. However, the pertinent question to ask is whether adequate funding is provided to the Science and Technical Schools Boards by the state governments in the Northwest Zone in order to effectively manage Technical Education in the zone? Whether the management of Science and Technical Schools Boards has provided adequate infrastructures required in the Technical Schools? Whether adequate funds are provided by the management of Science and Technical Schools Board for the training and retraining and provision of teacher's welfare? The answer to these questions could provide insight into the commitment of governments of the Northwest Zone towards the management of Technical Education in the zone. Aworanti (2012) noted that only better funding and management can turn around the parlous state of Technical education in Nigeria.

However, more studies are required in the area of needs assessment of how much investment is required for effective management of Technical Education. Similarly, the study is centered on

the Northwest Zone of Nigeria and the same need to be stimulated in other areas so as to meet up with the stated economic and environmental challenges being faced in the zone. Ugwuja (2010) summed up the position of Technical Education in National development when she opined that "Technical Education is a very useful aspect of the educational system because of the practical content it offer the trainees; it gives the trainees the opportunity to acquire skills, attitudes, interest and knowledge to perform socially and economically, work that is beneficial not only to themselves but to the society in general". This assertion was supported by Kanu and Buba, (2006), who recommended that "Government at all levels should make adequate budgetary provision to Technical education in order to improve the quality of population and family life". This recommendation is in line with the opinion of this researcher that the Northwest government should make adequate budgetary provision to the Science and Technical Schools Boards of their states in order for the Boards to effectively manage and develop Technical Education in the zone. It is the usefulness of Technical Education to the trainee, the society and the nation in general that motivated this study aimed at conducting needs assessment to compare and analyze the impact of funding in the management of Technical Education in the Northwest Zone of Nigeria. The pertinent questions to answer are that; is our Technical Education system adequately funded to train the required and qualified Engineers, Technicians, Technologists that will bring about the desired technological development? Above all, are these Technical Schools adequately funded to provide the required infrastructures, adequate and latest teaching and learning facilities and adequately trained teaching and non teaching staff in all the required courses? However, with Federal and State Governments continually accepting their inability to provide adequate funds to the educational sector, are there other sources and means of funding educational programmes in Nigeria and Northwest Zone in particular? Considering that

Technical Education is solely funded from government budgetary allocation through the Science and Technical Schools Board which is grossly inadequate, what would be the contribution of communities, industries, external/internal organizations towards funding of Technical Education, so as to achieve the desired National development? These and other questions shall be considered by the researcher in examining the impact of funding in the management of Technical Education in the Northwest Zone.

2.3.1 **Funding and the Management of Technical Education**

This study is to examine the impact of funding in the management of Technical Education in the Northwest Zone of Nigeria. The researcher as a student of Educational Administration and Planning having established a relationship between Technical Education and the Economic/Technological development of Nigeria and the Northwest Zone is interested in the impact of adequate or inadequate funding of Technical Education by the government of the zone in its management. This study shall expose the extent of government's commitments to the effective management of Technical Education because of its critical role in the development of any nation or state, Nigeria inclusive.

Anthony and Godwin (2013) opined that:

> *Education in Nigeria as well as the need for, and ways of adequate funding of Vocational and Technical Education in times of economic recession. The work recommends among others, the need for endowment fund raising by educational institutions for the provision of facilities and equipment for Vocational and Technical Education Training, establishment of a cordial school/community liaison to raise funds to promote Vocational and Technical Education as well as that the Parents-Teachers Association and the Alumni Association should help out through cash and kind donation to foster Vocational Education Training in Nigeria.*

The above opinion is supported by Joel, B. and Morgan, A. (2010), when they averred that "education in Nigeria has always been seen as a vehicle of growth and development as well as a means to free individuals from ignorance, disease and poverty". The researcher is interested in the translation of all these virtues into reality by the relevant governments of the Northwest Zone, hence the intension to examine the impact of funding in the management of Technical Education in the Northwest Zone. Aworanti (2012), asserted that "Adequate funding must be given to Technical Education programmes as they are capital intensive. They require a great deal of will power from those in authority". This assertion signified the role of governments in the adequate funding and by extension management of Technical Education in the Northwest Zone. This view was clearly expressed by Adesua, (1981), who explained that "from 1970 up till date, Education in Nigeria has been mainly financed by the public sector; with the takeover by the Federal and State Governments of almost all our educational institutions i.e. Universities, Polytechnics and its equivalents, Secondary, Technical, Teachers training colleges and Primary Schools, the public finance of education in Nigeria is daily gaining momentum". This explanation shows how much Education relies on funding from the government to provide the desired infrastructures, teaching materials and trained teachers, building of more Technical Schools and enrolment of significant senior secondary school students into the Technical Schools. But the pertinent question is still how adequate and regular were the various governments able to finance the Technical Education sector/(STSB). The answer to this and other questions is being sought by the researcher as a student of Educational Administration. The same opinion was expressed by Adesina, (1990) who stressed that "The implication of government assuming total control of financing education system is far reaching. First it means that the amount of education to be provided in a given year will solely be determine by the

amount of money government is willing and able to give to education. This also means that the volume of education has to be pruned anytime government declares its inability to meet the financial requirement of the education system". This assertion supported the position of this researcher that a comparative analysis of the impact of funding and the management of Technical Education in the Northwest Zone is necessary in order to ascertain the willingness of the government to manage Technical Education, in view of its immense importance to the development of the individual, the society, the state and the nation in general. With the above assertion, the critical position of funding to the management of education sector and Technical Education in particular is not in doubt, hence necessary research into the adequacy of funds provided by the government to the Science and Technical Schools Boards and alternative means of funding Technical Education (by the STSB) is crucial to the development of the sector. The negative effect of inadequate funding to the education sector was further buttressed by Adesina, (1990) when he opined that "generally speaking one of the most perennial challenges school administrators faced today is the issue of adequate funding of education by government, especially in the period of dwindling national financial allocation". This position justified the effort of the researcher as a student of educational administration to examine the impact of funding to the management of Technical Education in the Northwest Zone. The needs assessment of Technical Education is necessary in order to determine the adequacy or otherwise of the present source of funding Technical Education and other alternative sources that could be exploited by the Science and Technical Schools Boards in order to fast-track the management of Technical Education in the zone. Similar pertinent questions were asked by Varghese, N.V, (2010), who enquires as to "How much should be invested in Education? Is there any optimal share of national or state income to be invested on in different levels of education?" Concluding

that “these questions although very important remain unanswered for a very long time. The answers to these questions to this day remain more a matter of informed speculation than conclusive evidence generated from empirical analysis”. It is in a bide to find answer to question on the adequacy or inadequacy of fund to the Technical Education in particular that motivated the student to venture into determining the impact of funding and the management of Technical Education in the Northwest Zone of Nigeria. According to Caroline and Kathy (2010) “Education in general is a “public goods” with benefits not only to individuals but also to society at large. Governments thus have an obligation to ensure that all children have access to education, which would help them develop themselves, their families, communities and society as a whole”. To support this assertion Varghese (2010), observed that “the advanced countries in the post-world war II period invested a higher share of their national income in Education and experienced more rapid progress in the education of their population”. This researcher intended to investigate if similar responses took place in the Northwest Zone particularly with the creation of Science and Technical Schools Boards and where such responses were negative due to the ignorance of the governments on the importance of the Technical Education, to help in enlightening the governments on the need to invest heavily in the management of Technical Education for the rapid Technological development of the Northwest Zone. This view is further elaborated by Varghese (2010), when he posited that “A higher level of expenditure on education seems to be positively associated with the level of management of education in a country. This is primarily due to the fact that education in most countries was mainly a public funded activity”. In support of this view, this researcher is of the opinion that the cost of goods and services embedded in the Technical schools system in particular, is a sufficient justification of the emphasis commonly placed on school funding. The magnitude of the number of employees,

buildings, equipments and supplies used in the school system showed how important funding is to educational administration, hence the need for research in this area. Similarly, the importance of adequate funding in Educational management and Planning (Technical Education in particular) is hardly contestable, since it is within this expenditure that teaching facilities and personnel are procured. This importance prompted the researcher to examine the impact that adequate funding or otherwise could have on the management of Technical Education at the Technical (senior secondary) school level in the Northwest Zone and other source that could be exploited to complement the present source (public) of funding Technical Education by the STSB in the zone. It is a fact that most Government Secondary and Technical Schools lack well equipped laboratories and workshops with relevant and adequate teaching materials. This is another setback to the quality of Science and Technology Education. Adequate and relevant facilities and teaching materials have to be procured, therefore, more funds have to be provided by government. Aworanti (2012) also observed that "no one can dispute the fact that the nations quest for sustainable development has been hampered by the dearth of technological development occasioned by deliberate denigration of technical and vocational education. It is in line with this remark that the researcher decided to embark on examining the impact of funding in the management of Technical Education in the Northwest Zone. The study has become necessary because inadequate funding to the Science and Technological Schools Boards would likely affect the quality of Technical Education necessary for the Technological development of the Northwest Zone in particular and Nigeria in general. Abubakar and Abba (2008) opined that "Funding is the bedrock of any Educational system. Inadequate funds lead to poor quality Science and Technology Education".

Similarly, Keith (2010) observed that "The share of total government revenue allocated to Education is an important indicator of the overall priority accorded by government, consciously or unconsciously to Education". This assertion is in line with the decision of the researcher to examine the adequacy of funds committed to the Science and Technological Boards by State Governments of the Northwest Zone in order to determine the extent of their commitment to the effective management of Technical Education in their states. Hence the intention is to conduct a study into the impact of funding in the management of Technical Education in the Northwest Zone of Nigeria.

2.3.2 Community and the Management of Technical Education

Having established the inability of government alone to adequately fund the management of Technical Education in the Northwest Zone through the Science and Technical Schools Boards; it has become necessary for the boards to seek alternative sources of funds that could argument government budgetary allocation to the boards.

It is in consonance with that consideration that the researcher will examine the role of communities towards the management of technical education in their localities, local governments' states and the country in general, since any development recorded in the states or country is for the benefit and common good of the society.

Various works and authors on Technical Education viewed it as an instrument for development of the potentials of the individual, in accordance with the basic norms and values of a society, therefore the basis of growth, economically and technologically and the kind of development of any society depends on the qualities of its intellectuals, technological and Scientific advancement, necessitating both government and the society to invest heavily in the funding of

this sector of education, in order to attain developmental goals of the society. According to Ugwuja (2010) it is believed by many people that through technical and vocational training boys and girls as well as adults will be trained to acquire requisite skill that will enable them secure employment, which will be beneficial to themselves and the society. This study is therefore aimed at determining the role played by communities of the Northwest Zone in the management of Technical Education particularly the funding aspect. Pertinent questions are raised as to whether the communities are aware of the important role Technical Education could play in the development of the community, society and their states and country? Whether the community is aware of the need for them to contribute towards the funding of Technical Education so as to tap from its usefulness of employment generation and advancement in the sphere of health care, infrastructural advancement and so on? The needs assessment attempted by this researcher included the need to augment the public expenditure to Technical Education by the direct beneficiaries of the systems which are the communities, hence the position of communities in the management of Technical Education is hereby reviewed in this subsection in order to examine all options available to the funding and management of Technical Education in the Northwest Zone of Nigeria. Adesua, (1981) was of the view that "Nigerian Education has witness the active participation by non-governmental agencies, communities and individuals as well as government interventions. The terms of financing education in Nigeria has been accomplished through school fees, grant-in-aids from various governments and levies by cultural unions and various forms of voluntary contributions by parents and guardians through PTA etc. However, Technical Education sector suffered from lack of adequate funding". What this view implied is that while the grammar or conventional system of education enjoyed all forms of patronage from the various community organs in Nigeria, Technical Education did not enjoy commensurate

attention from the Nigerian society. Little wonder that there are all forms of community grammar schools, private grammar schools etc but one could hardly find a privately funded and operated Technical College in Nigeria. The question one may ask is this whether the Science and Technical Schools Boards of the Zone received any assistance from the communities in their states? In support of this view, Fafunwa, (1995), posited that "one of the major deficits in Nigerian Educational System is the low priority accorded to Technical and Vocational Education by Government". Similarly with this low priority the researcher is curious to ascertain the contribution of communities towards the funding of Technical Education in the Northwest Zone, one will opine that this levity did not stop with government alone but extend to our communities including intellectuals; hence one observe that there are very few empirical works in the different field of Technical Education when compared to the available ones in the grammar and business education sector. This lack of adequate empirical works and data on Technical Education, coupled with its importance to the development of the society motivated the researcher to conduct an analysis of the impact of funding in the management of Technical Education in the Northwest Zone of Nigeria. As earlier observed in this study, the expansion and management of Technical Education is constrained by several factors, among which are that Technical Education in the Northwest Zone is solely funded by government bodies (STSB) and has scarcely attracted the attention of voluntary Agencies, Unions or Associations who have been the main generators of growth and development of the secondary grammar schools through donations, grant-in-aids and private schools. There is therefore a dire need for research and enlightenment into other sources of funding Technical Education at a cheaper and more attractive ways to the communities to invest in. This reason justified the effort of this researcher in conducting this study. Similarly, Technical Colleges, even in their elementary forms are relatively more

expensive in the cost of building and maintenance than the grammar schools. Thus, it is essential that educational planners conduct more research into cheaper means of funding Technical Education, cost must be realistically determined and maximum utilization of the schools facilities must be ensured by the Sciences and Technical School Boards in its bid to proffer alternative source of funding for Technical Education Towe, (1998), opined that "If the issue of inadequate funding by government will continue to surface, institutions (STSBs/Colleges) must work out how the communities must contribute to effectively fund Technical Education. The issue of free education at all levels may have to be revisited if there is no other solution to the perennial problems of funding in the Education system". This view support the opinion of this researcher that more study is required into the area of Technical Education, particularly the funding aspect, which is necessary for the desired development to take place, it is the opinion of the researcher that the Sciences and Technical School Boards of the zone have not exploited other options of sourcing for alternative funds. Again Osayomwanbor, (2008) observed that "the public perception about Technical Education in Nigeria is on the decline; as a result less people are interested in such education". In the opinion of this researcher, this fact may not be unconnected with the situation in most Technical Schools in Nigeria where poor management with the teaching facilities are so poor and obsolete, with inadequate infrastructures and poorly trained and motivated teaching staff and lack of public enlightenment by the government on the importance of technical education. This may lead to the production of half baked students with theoretical knowledge only because of lack of practical materials and adequately trained teachers; and these boil down to the inadequacy of funds provided by the government to the Science and Technical Schools Boards for the provision of Technical Education and few people or communities contribute to the funding of Technical Education. It is this panacea that mitigated

the researcher to examine the role of the community in the funding of Technical Education in order to proffer solutions as well as adequate recommendations that will help alleviate the perennial problem of funding Technical Education in the Northwest Zone of Nigeria. The need for community participation and the government's inability to guarantee the development of Education (particularly Technical Education) has been emphasized at different forum in Northern States of Nigeria. Aminchi, (2005) emphasized on "the need for more efforts by both private organizations and communities towards the management of education, as government alone cannot shoulder the responsibility of education since the sustenance of education is a collective responsibility on both the government and other citizens". This opinion supported the view of this research that owing to economic instability; government alone may not be able to fund Technical education because of the cost implication. The study therefore intends to determine the extent of community participation towards the development of Technical education in the Northwest Zone. Further to the above, Fafunwa, (1995) noted that "Technical education has a slow start and develop less quickly than other forms of education in Nigeria. This is partly due to the fact that the voluntary Agencies which pioneered western education in Nigeria were unable to increase or popularize Technical and Vocational Education on the same scale as literary education since the former was much more expensive in terms of staff and equipment". The poor education may be due to the cost implication of putting up of its infrastructures, teaching materials and tools and training of technical teachers. A further research on this may likely expose better solutions and alternative means of community participation in the funding and management of Technical Education in the Northwest Zone of the country. Such desire gave rise to this study of determining the position of funding and the management of Technical education in the Northwest Zone considered to be more educationally backward than

the remaining geopolitical zones of Nigeria. Fafunwa (1995) further opined that for Technical Education to gain acceptance by the local communities, "the Technical Colleges should undertake the training of youth leaders and community centre workers and stress extra mural work in community development. This researcher intends to make similar and far reaching recommendations based on the findings of the study.

2.3.3 External/Internal Organization and the Management of Technical Education

External organization's support to education played a significant role in the management of education in Nigeria at its early stage. Most external support for promoting education in Nigeria was in the form of external grant-in-aid by foreign governments mostly from developed countries i.e. UK, USA. According to Adesina, (1990), "the place of external aid in a school system is very difficult to determine because external aid generally does not come directly to individual institutions but to organizations and governments who distribute the aids to their own client institutions". In the researcher's opinion, most of the aid is provided to government and private organizations with a particular motive by the donor country or organization with religious and ideological reasons often playing a significant role in the extent of such aid provided. This is mostly detrimental to the receiver of such aid as it often interfere with national policies and economy to suit the donor nation or organization, such aid sometimes is determined at the developmental state of the programme, leaving behind wastage of both effort, structures and personnel recruited for the purpose. These outlined factors may hardly make any positive impact on the management of Technical education which may require sustainability and continuous financing for effective management. This study therefore wishes to determine other ways through which the governments and Sciences and Technical Schools Boards of the Northwest Zones could partner external organizations on equal and developmental basis not as a dependant

or donations. External grant-in-Aid usually takes different forms, for example Cerynch in Adesina (1990), identified three major forms of external grant-in-Aid to Education;

a) Supply of Expatriate Teachers
b) Provision of Scholarship for studies; and
c) Financing of institutions or particular programme of Education

Adesina, (1990), cited in Muhammad, (2001), stated that "External Aid played a significant role in the earlier development of Education in Nigeria, where about £7,710 Nigerian Pounds was provide as Educational Aid to Nigeria between the year 1963 to 1964. Also between 1961 to 1964 59% of the teachers in the Secondary Schools in Eastern region, 95% of Northern region and 49% of Western region and 40% of Lagos were expatriates provided under various aid schemes. Various institutions i.e. Kano Teachers Training College and Technical Training College, Kano were established with Aid from the United State and Britain (Adesina, 1981: pp157-162). The study is intended to ascertain if the Science and Technical Schools Boards of the Northwest Zone received similar donation and what impact such donation has had on the effective management of Technical education in the zone?

The researcher is of the view that External Aids of this magnitude may not be feasible now because of global turn of events such as political and economic considerations. Political alignments with different world power blocks and their opinion on such issues as Acquired Immune Deficiency Syndrome (AIDS), mother and child mortality and other designed programmes such as MDGs, NEEDS and SEEDS are the major Pre-occupation of major donors at the detriments of such issues as the management of Technical education. Hence most of the Aid received these days are tied to particular projects that are of interest to the donor country and not the receiver nation, therefore the reliance on such Aids for the management of Technical

education may not yield the desired result. Therefore research on the needs and sustainability of Technical education programme in the Northwest Zone is necessary in order to fashion out sustainable means of funding the programme. Also donor nations have now resorted to offering loans, with stringent conditions to be met by the receiver nations and also tied the receiver nation to the global opinion of the donor nation on both domestic and international political issues. Similarly, the availability of locally qualified teacher has ruled out the previous grant-in-Aid of foreign teachers. The study shall therefore examine the adequacy of locally trained teachers and the provision made by the Science and Technical School Boards for training and retraining of local technical teachers which made it cheaper for Nigeria to train and employ than to receive and maintain expatriate teachers. The world economic recession has also limited monetary Aids to receiver nations. This view was posited by Jandhyala, (2010) who observed that "the global economic crisis added to the problems of Aids from the point of view of both the developed and poor (dependant) countries. Aid organizations and developed countries might face declining revenues, rising fiscal deficits and overall resources crunch and might be forced to go back on other fledges and commitment". Already it has been noted that "nearly all donor countries are falling short of their Aid pledges for 2010. (UNESCO 2010)". This view clearly exposed the danger of relying on external aid for the development and sustenance of Technical education as the programme may collapse any time the Aid used in financing it is not forthcoming. This study is therefore relevant in providing alternative sources of funding Technical education in the Northwest Zone. The danger of dependency risk was further elaborated by Birger Frederickson (2010) who noted that "the over arching purpose of aid to any sector is to add to domestic resources, thereby helping the countries to accelerate development and grow out of Aid dependency. But if Aid instead ends up substituting for domestic resources, then it risks creating

dependency without increasing in a sustainable manner, the country resources". The researcher observed that for Technical education programmer to be successfully implemented, it should be adequately funded and sustained over a long period of time. However, corruption tend to truncate both the unsteady foreign Aid to education and block easier access to domestic resources, making the education sector to suffer from lack of adequate funds. This study therefore wish to draw the attention of those in authority and policy makers and the Science and Technical School Boards on the impact of funding in the management of Technical education in the Northwest Zone, and the need for the funding to be sustainably maintained over a long period of time, even in the face of global economics crisis. This view was supported by Jandhyala, (2010) who observed that "the global economics crisis seems to have derailing effect on the several plans and strategies, particularly relating to financing of Education. Therefore the need to safeguard the section from adverse effect of global crisis on funding is being increasingly felt, least the gains made in the last couple of decades with respect to Education should be lost". It is the opinion of this study that already the little gains made in the area of Technical education is lost and Government of the Northwest Zone and the Science and Technical School Boards responsible for managing it need to devise fresh strategies towards the funding of Technical education. Edem, (1982) supported the view that "An excessive reliance on foreign Aid can frustrate educational plans and bring them to a halt when the Aids are no longer forthcoming. This is more often so because the receiver of such Aid finds it difficult and sometimes as economically unwise to continue with the project after the aids has ceased". This researcher intends to investigate the position and effect of external Aid to the management of Technical education in the Northwest Zone and to suggest areas where such Aid could be adequately utilized if

available. Suggestion shall also be offered on ways the zone could partner with external organizations rather than relying on stipends from them.

Internal organizations are also no better than the external ones in the area of Aid to Technical education in the Northwest Zone. Construction companies, Estate developers, production companies and organizations are the major consumers of Technical schools graduates/products. However, they do not contribute to the funding of the Technical Colleges, rather, they prepare to employ the graduates at a cheaper rate, train them in their own area of specialization and exploit their labor without commensurate compensation. In the opinion of Towe, (1998), "individual philanthropist and large organizations reluctance to donate some or all the pieces of equipments for an essential laboratory or workshop related to their organizations may have contributed to the lack of effective management of Technical education in the Northwest Zone". Suggestion shall also be offered on how the Science and Technical School Boards in the zone could take advantage of such organizations towards the funding of Technical education. The study therefore intends to highlight areas that such individuals and organization can contribute towards the effective management of Technical education in the Northwest Zone. The factors observed in relation to the role of external and internal organizations towards the management of Technical education motivated this researcher to analyze the impact of funding in the management of Technical education in the Northwest Zone, so as to determine other sources of augmenting the public sources of funding Technical education in the Zone on a sustainable basis.

From the foregoing review, stakeholders view on the position of Technical education in national development, the impact of funding in the management of Technical education, the position of community contribution to the management of Technical education, the position of external and internal aid to technical education as well as the position of research in the management of

Technical education were reviewed with varying opinions expressed. In the view of Birniwa, (2001), “it has been realized worldwide that Technical education is the hub of any nation’s economic, political and social development. The self reliance of any nation is not reliable in the absence of Technical Education”. Also Giffikin and Morrissey, (1992), Winwfield et al (1993) and Okorie (2000) maintained that lack of employable skills were responsible (at least in part) for unemployment in most developing countries. In almost all industrialized nations of the world Technical education has been used as an instrument to fight unemployment and declining skills level. Hence the Science and Technical School Boards and Governments of the zone should determine how best to fund Technical education on a continuous basis. These views clearly signified the necessities for effective research into the funding of Technical education, so as to attain the Technological development of the nation in particular and the Northwest Zone in general. This is because of the strategic importance of funding in the management of Technical education, which in turn generates employment, skills development and by extension economic development of the nation. The view on the position of funding in the management of Technical education was expressed by Bukola, (1987) who posited that “if Nigeria is really serious about making a Technological breakthrough, then adequate funds must be regularly made available for Technical education in relevant institutions”. This view is in consonance with the researcher’s position that needs assessment into the funding of Technical education become necessary so as to highlight areas of needs for effective funding by the government of the Northwest Zone. This is because Technical education received all its funding from the budgetary allocation of the states through the Science and Technical Schools Boards and the adequacy of these budgetary allocation is dependent on the conviction of the governments that Technical education is the most viable vehicle of development in their states. This study therefore wish to find out the

adequacy or otherwise of funds allocation to the Science and Technical Schools Boards for the implementation of education programmes, similar view was expressed by Hinchliffe (2010) who stated that "the share of government revenue allocated to education is an important indicator of the overall priority accorded to it by government, consciously or unconsciously and financial resources affect the performance of education system and their ability to reach targets". Similarly Hinchliffe, (2010) is of the opinion that, "how the education sector in general and more particularly the different levels of the system will fare in the future allocation of government resources depends in part on the degree of political will to achieve universal schooling and the extent to which the different level of development of education in a country. This is primarily due to the fact that education in most countries was mainly a public-funded activity". This view is in consonances with one of the pertinent questions of this study, i.e., whether the government of the Northwest allocated sufficient funds for the management of Technical education in the Zone. In the opinion of the researcher, the commitment of government towards adequate funding of Technical education is the only panacea towards its effective management. It is this desire that motivated the researcher to conduct an analysis on the impact of funding to the management of Technical education in the Northwest Zone. This is because stakeholders noted a decline in the level of government's investment (allocation) to education in general and Technical education in particular. Tilak, (2010) noted that "the reality is that many countries even in the present century invest less than 6% of their GNI (Gross National Income) to education, with Asian counties average share less than 4% percent and African countries is only 2.5% percent, in fact, in a good number of countries, this figure declined between 1990 to 2007". It is in effort to determine the effect of this decline in allocation to Technical education by the government of Northwest Zone to the Science and Technical Schools Boards of the zone that the researcher decided to conduct

comparative analysis of funding in the management of Technical education in the Northwest Zone, with the intension of determining other sources that will augment government's allocation to Technical education in the Northwest Zone. The researcher also observed that the decline in allocation to Education might not be unconnected with the global economic crisis being experienced by government. Jendhyala and Tilak, (2010), noted that "as economic situation of a country worsens, the allocation to education might also worsen. This crisis might force the vulnerable economics to change their priorities away from education sector in favour of immediate growth stimulating sectors". In the view of this researcher, Technical education might suffer more than other sectors of education in the event of governments change in priority. This is because of its high demand for fund, for the procurement of infrastructures, machineries, tools and practical materials that are expensive to procure. The disparity between Technical education and other sectors was already noted by Segun and Oni, (1984), who opined that, "another disturbing but not surprising features of Nigeria's Secondary Education system is the imbalance in the distribution of students between Secondary Grammar and Secondary Technical Institutions. For school, the ratio in 1965 was one Secondary Technical School to twenty-two Grammar Schools 1:22. For pupils it was 2 to 33 respectively". In the opinion of the researcher this may be more prevalent in the Northwest Zone than other parts of Nigeria due to the poor regards to Technical education since according to Babalola, (2006) "Government is the most reliable sources of education financing, contributing as much as between 70% and 90% to the recurrent source of funds. Therefore any short fall in funding from government sources to education will adversely affect the provision of Technical education in Nigeria". This study is therefore relevant to the present circumstance as it shall investigate other sources of augmenting the noted imbalance. The study shall also attempt to enlighten both governments and community

of the Northwest Zone of the importance of Technical education so as to draw their attention on the need to increase the funding of Technical Education. This is because of the noted retardation in Technical Education. Segun and Oni (1984) observed that, "the expansion of Technical Education in Nigeria has been retarded by four major factors, i.e.:

i. Technical education is provided mainly by government bodies and has scarcely attracted attention of the voluntary agencies who had been the main generators of growth and development of Secondary Grammar Schools.
ii. There had been a general misconception of the nature and purpose of Technical education in developing countries as a whole.
iii. Technical Schools even in their crudest forms are relatively more expensive than the academic oriented institutions. Comparative standards would show that the cost of building and maintaining a Technical institution is approximately three times that of a Grammar School, with the unit cost per student in the two institutions in the ration of 1:4.
iv. The employment market for products of the Technical School is more prospective and theoretically than real. The lack of fairly solid infrastructures or a fairly industrialized economy where some "dignity" is attached to the Technicians job failed to attract students and community towards Technical education".

Items 1 to 3 of the above supported the intention of this study in enlightening governments and community on the importance of funding Technical education towards national development and the need for effective funding of the programme for its effective management. This is because education generally suffers from lack of adequate funds to run it effectively. "Technical education appears to have a greater share of the problems of funding because of its being capital intensive" Birniwa (2001). "Similarly, economic crisis implies negative growth and slow growth

in education. Slower economic growth implies reduced capacity of government to invest in education", Varghese, (2010). The position of external and internal Aid to the funding of education in general and Technical Education in particular was no better than the position of Governments and communities. According to Varghese, (2010), "External or foreign Aid to education was adopted as a strategy for fostering development based on the belief that underdeveloped markets of the developing countries will not attract private capital and foreign investment". This researcher noted that majority of the external Aid to developing countries are targeted towards profit making ventures and economic development of the donor and receiving country with fewer allocations to education. Similarly, the grant to education is mostly inclined to academic related sector than the Technical education sector. According to Birdsall et al., (2010) observed "that, at times projects are funded through "tied aid" which compels receiver nations to spend aid money on donor products and services". This view supported the researcher's opinion that most external Aids are granted with a particular motive different from the need of the receiver nation. The study therefore intends to determine the areas of needs in Technical education that would enable governments to solicit and channel external aids, for effective management of Technical education in Nigeria and Northwest in particular.

2.4 Review of Empirical Studies

A great number of studies have been conducted on the issue of funding and its impact on the management of technical education not only in Nigeria, but also in many other developing and developed countries. Similarly there are some other write ups in forms of position papers that have also been published in many scholastics journals featuring the impact of funding in the management of vocational and technical education in Nigeria. A quick and general review of a number of such empirical studies would expose one to the fact that vocational and technical education is grossly under-funded. For instance Uwaifo (2010) lamented that inadequate funding

is one of the nastiest challenges dwindling the effective management of technical education in the country, and it results in to inadequacy of facilities that are necessary for effective provision and management of technical education. He therefore observes that the inadequacy in teaching, laboratory and workshop facilities has contributed to the diminution of the quality of technical education graduates in Nigeria. Anthony, Godwin and Hogan (2013) observe that despite several efforts of successive governments in the country towards financing the education industry, under-funding is still the bane of Vocational and Technical Education in Nigeria as could be seen in the inadequacy of infrastructure, human resources and equipment in many institutions at the secondary to tertiary levels. It is unfortunate that, vocational education has always been given the shorter end of the stick when it comes to statutory allocation of finances to the agencies of government. Emphasizing the significance of funding for the training and development of teachers of technical education, Abor (2015) posits that Technical education is a very expensive programme and it needs a lot of funding. The products of the technical colleges will only perform or teach effectively and better, if the right and adequate tools, equipment and machines are used by a qualified and competent teacher in the teaching processes.

In a study conducted by Isa (2012) on the roles of technical education in Kano state, he discovered that;

- Most technical colleges are stocked with outdated machines/equipment, and there are no materials to be used in the conduct of practical activities,
- Acute, low student enrolments due to lack of encouragement and public awareness of technical and vocational education,
- Absence of qualified and well experienced teachers and instructors
- Poor funding by the governments,

- Poor societal participation in technical and vocational sector and
- Unfavorable government policies.

The above findings, as could be observed, dwelt on the fact that the provision and management of technical and vocational education is bedeviled with numerous drawbacks that need to be addressed squarely. Inadequate funding in particular takes precedence over the rest. This perhaps, is because without adequate financial backing none of the goals of this vital system of education could be attained. And that for management to be effective, satisfactory financial provision is a must. Thus without such sufficient financial sponsorship a great number of management challenges are unavoidable. This finding is in consonance with the assertion of this study which motivated the researcher to examine the impact of funding in the management of technical education in the Northwest Zone of Nigeria.

In another study conducted by Jeerapattanatorn (2013) on Current issues in Vocational and Technical Education in Nigeria, it has been discovered that some of the issues and problems mitigating against the teaching of technical education or vocational education include:

1) Funding
2) Facilities
3) Brain Drain
4) Staff training and retention
5) Staff situation/Adequacy
6) The curriculum of technical education
7) The apathy of political office holders/law makers and the community.

Funding as could be observed is seen in almost all the studies reviewed as the fundamental problems technical and vocational education face in the country. And that without adequate

funding the provision and management of technical education could be jeopardized. Thus, most of the recommendations proffered by such researchers point to the need for adequate funding because of the ascertained nexus between adequate funding and the qualitative vocational and technical education For instance, Uwaifo (2010) recommends that for progress to be made in Nigeria the challenges confronting technical education must be recognized and fought vigorously. Also Aworanti (2012) observed that only better funding can turn around then parlous of technical/vocational education in Nigeria. It is in view of recognizing the challenges confronting technical education that this researcher intends to investigate the impact of funding technical education in the North West Zone of Nigeria so that adequate resources could be allocated to the programme in order to achieve positive outcomes. In the same vein, Anthony et al (2013) recommended among other things that Schools and departments involved in Vocational and Technical Education should from time to time organize endowment fund raising to muster funds for the provision of facilities, equipment and infrastructures for vocational education. Stressing the significance of facilities, Isa (2012) asserts that vocational and technical equipment and materials such as machines, tools, modern office equipment in the administrative section of the school, raw materials needed for practical construction (such as woods, sheet materials, cements, gas etc.) are essential aids of teaching and learning process in technical and vocational education, the lack of which jeopardizes the attainment of the objectives behind the programme. This study also intends to examine the adequacy or inadequacy of funds, teaching materials and infrastructures in the technical schools of the Northwest zone so as to make appropriate recommendations.

In another related study conducted by Zonkwa (2010) titled Vocational Education in Kaduna State the findings revealed that;

i. 35% of the school budget is not spend on vocational education practices and application;

ii. Student involving in policy at juniors level which govern learning activity;

iii. Student pleasing the authoritative knowledge of the teacher;

iv. The value and validity of student' experience, knowledge and assessment is not accepted

Note that the first finding points to inadequacy of budgetary allocation to technical education in the state. In line with the above findings, Aworanti (2012) advised that Government must show more commitment to better funding and management of our technical/vocational education in Nigeria.

Nelson (2013) in a study discovered that the followings are the problems of vocational education in Nigeria:

1. Lack of skilled man power,
2. Acute shortage of vocational technical teachers
3. Lack of adequate training facilities and equipment
4. Inadequate vocational, technical education policies
5. Lack of follow –up and continuity in government policies
6. Poor funding of vocational/technical education
7. Poor remuneration of vocational/technical teachers;
8. Lack of entrepreneurship education in vocational/technical education and training
9. Lack of adequate security/security needs and
10. Poor emphasis on the practical aspect of vocational technical education as most tertiary institutions charged with the responsibility to teach vocational technical education subjects in Nigeria today are poorly equipped with machines and relevant tools/equipment.

In the same vein Anthony, et al (2013) in their research earlier reported study posits that the funding aspect of vocational and technical education in the country is in shamble saying that:

> *At present, there are fluctuations in the supply of high and middle level manpower requirements in the nation's institutions of learning especially in the areas of Vocational and Technical Education. This is mostly due to inadequate funding. The poor funding is shown in ill-equipped, workshops, laboratories, farms, and typing pools/computer laboratories in the schools. Definitely the goal of Vocational and Technical Education cannot be achieved without them. The official hypocrisy occasioned by lip service paid by government in the funding of education particularly Vocational and Technical Education has resulted in the current political proliferation of institutions of learning without any concomitant provision of relevant equipment and infrastructures. Besides, the infrastructures in schools that were established in the early 1970s are mostly dilapidated due to poor maintenance. There is, therefore, the need for effective funding to facilitate maintenance and put the equipment in the laboratories and workshops in good working conditions through routine checks, servicing and repairs.*

Abbassah (2011) in a related study observed that the followings are part of the problems of technical and vocational education in Nigeria:

1) **Inadequate Supply of Technical Workshop**

Most technical colleges cannot boast of adequate functional workshops even when the teachers may be ready to teach the students, in spite of poor remuneration. There are some cases where technical equipment were supplied but no workshop to install the equipment. This certainly led to frustration on the part of the technical college teachers.

2) **Inadequate Supply of Instructional Materials**

Instructional materials and consumables in technical colleges are very expensive and the federal and state governments have not been providing funds to address this critical area. All we are getting is just lip service to technical education. Even when the teachers are ready to improvise instructional materials, the little amount of fund needed could still not be received from the college authorities

However, in a rather different study conducted by Umoru and Okeke (2009) on the challenges of technical and vocational education in mitigating climate change induced catastrophes in Nigeria, the researchers discovered a number of different problems from what has been discussed above. Policy issues, negative attitudes and many other quandaries were ascertained. Thus the investigators conclude that:

Arising from this study, the following recommendations are presented:

1. Technical and vocational education practitioners should use their understanding of science and technology to deal with challenges posed by climate change.
2. Governments (national, state, and local) should be assisted by technical and vocational education professionals to make the required legislation that will give effect to the principles set forth by UNESCO.
3. Technical and vocational education curricula should be reviewed and revised continually to ensure that students are empowered in natural disaster risk reduction techniques.
4. Continued research aimed at improving predictions of future climate changes should be pursued by technical and vocational education professionals

Generally speaking the empirical studies reviewed here differ significantly from the current study in many ways. Emphases in most of the studies are mostly on the challenges facing vocational and technical education in Nigeria without making reference to the management, poor administration of the programme. The scope of this study as could be observed is Northwest Geo-political zone of the country, while a number of the empirical studies reviewed either dwelt on one state or covered the entire country. Similarly, the current study differs in its concentration on secondary level of technical education, while a number of the studies reviewed extended their scope to tertiary level institutions.

2.5 The National Board for Technical Education (NBTE) and the current position of Funding Technical Education in the Northwest zone of Nigeria.

The National Board for Technical Education was established by Act No. 9 of January 1977. The Act was re-enacted severally, particularly in 1985 and 1993. The 1993 Act empowered the Board to recommend the establishment of private Polytechnics and Monotechnics in Nigeria. The genesis of the establishment of this act as explained by the official website of the Board is that The Federal Government identified the acute shortage of technical manpower as a major constraint towards the execution of its development plan. In response to this, government in 1972 established the then National Science and Technology Development Agency (which later metamorphosed to Federal Ministry of Science and Technology) which set up a Working Committee on Scientific and Technical Manpower and Science Education. The Committee produced a report on middle-level technical manpower and their training. Some of the Committee's recommendations included the following:

a. In order to have a nationally accepted standard in technical education, there should be a harmonization of the entry qualifications and diploma standards throughout the nation;

b. In order to eliminate the non-uniformity in terminal diplomas issued by existing colleges of technology, there should be a national certificate in technical education;

c. In order to attract the right kind of staff to the technical colleges and polytechnics, there should be a harmonization of technical staff standards including staff structure, remuneration and conditions of service;

d. In view of the fact that courses in many technical fields from which the Development Plans need to draw manpower at the middle-level are not provided for in our existing

colleges, there should be expansion of the courses and facilities in these colleges; and new colleges should take into account the required courses in planning their programmes;

e. In view of the gaps in the admission capacity and actual enrolment for the existing courses in the technical colleges and polytechnics, there should be full utilization of these facilities through a review of the admissions policy, including part-time admissions, and massive awards of technical scholarships;

f. In order to encourage more enrolment in technical courses, more avenues for practical experience for newly qualified trainees, should be created; this can be achieved through immediate employment of the trainees in public and private industries using, if necessary, the facilities of the Industrial Training Fund.

The Committee further recommended that a National Board for Technical Education be created which should be charged with the implementation of its recommendations.

The main functions of the Board according to its official website are:

a) To advise the Federal Government on, and co-ordinate all aspects of technical and vocational education falling outside the universities and to make recommendations on the national policy necessary for the training of technicians, craftsmen, and other middle-level and skilled manpower;

b) To determine, after consultation with the National Manpower Board, the Industrial Training Fund and such other bodies as it considers appropriate, the skilled and middle-level manpower needs of the country in the industrial, commercial and other relevant fields for the purpose of planning training facilities and in particular to prepare periodic master-plans for the balanced and co-ordinate development of polytechnics and such plans shall include;

i) The general programmes to be pursued by polytechnics and Technical Colleges in order to maximize the use of available facilities and avoid unnecessary duplication while ensuring that they are adequate to the manpower needs of the country;

ii) Recommendations for the establishment and location of new Polytechnics and Technical Colleges as and when considered necessary.

iii) To inquire into and advise the Federal Government on the financial needs, both recurrent and capital, of polytechnics and other technical institutions to enable them meet the objectives of producing the trained manpower needs of the country;

iv) To receive block grants from the Federal Government and allocate them to polytechnics in accordance with such formula as may be laid down by the Federal Executive Council;

v) To act as the agency for channeling all external aid to polytechnics and Technical Colleges in Nigeria;

vi) To advise on, and take steps to harmonize entry requirements and duration of courses at technical institutions;

vii) To lay down standards of skill to be attained and to continually review such standards as necessitated by technological and national needs;

viii) To review methods of assessment of students and trainees and to develop a scheme of national certification for technicians, craftsmen, and other skilled personnel in collaboration with ministries and organization having technical training programmes;

ix) To undertake periodic review of the terms and conditions of service of personnel in polytechnics and to make recommendations thereon to the Federal Government;

x) To collate, analyze and publish information relating to technical and vocational education;

xi) To consider any matter pertaining to technical or technological education as may be referred to it from time to time by the Minister;

xii) To carry out such other activities as are conducive to the discharge of its functions.

In addition to the above, paragraphs 8(1) and 8(2) of Act 16 of 1993 states as follows:

> *"The responsibility for the establishment of minimum standards in Polytechnics, Technical Colleges and other technical institutions in the Federation shall be vested in the Minister after consultation with the National Board for Technical Education and thereafter the Board shall have responsibility for the maintenance of such standards".*

"The Board shall have power to accredit programmes of all institutions mentioned in subsection (i) above for the purpose of award of national Certificates and diplomas and other similar awards, and for entry into national and zonal examinations in respect of such institutions".

The Polytechnics/monotechnics fall under varying proprietorship. They are either Federal, State or privately owned and the expectations from the Federal Government is for all of them to enjoy NBTE accreditation, which ensures uniformity of practice and maintenance of quality assurance in curriculum and infrastructures, including funding.

However, findings revealed that the Board refused accreditation for many States Technical Colleges and Polytechnic courses due to inadequate infrastructures, teaching materials and inadequate staffing which are all due to inadequate funding by the State Governments. Halima

(2010) in her study on relevance of NBTE discovered that three factors were found to have significantly influenced ineffective integration of technology were teachers' incompetence, lack of training and insufficient technological infrastructures. This funding concurred with the view of this researcher that inadequacy of infrastructure s, qualified teachers would have adverse effect on the management of technical education and all this in hinged on inadequacy of fund hence the effort of this research to investigate the position of funding and effective management of technical education in the Northwest Zone. Similarly, Halima (2010) found out that Federal Institutions (Polytechnics/Monotechnics) are more adequately equipped with infrastructures and man power resources than the state owned Institutions. Thus, indicating that state institutions are usually underfunded. This gave impetus to the effort of this study to examine the position of funding and the effective management of technical education in the Northwest zone of Nigeria.

2.6 Summary and Uniqueness of the Study

The literature reviewed in this study provided an in depth knowledge on the various parameters involved in the funding of Technical education. The review also explored the various definitions, meanings, ideas and positions on Technical education in national development and the position of governments, communities and external/internal organizations towards the funding of Technical education as expressed by various scholars and researchers in the field of Technical education and Educational Administration and Planning. In the review, it was discovered that:

- State Governments accord little priority to funding of technical education in the Northwest zone;
- Funds allocated to technical education is dependent on economic position of the states and political will to do so (which in some instance is nonexistent);

- Lack of awareness on the importance of technical education to the communities;
- Lack of efforts by government to collaborate with private organizations, NGOs, PTAs, Alumni associations and the likes towards the management of technical education in the zone.

While there are plenty of studies associated to the funding of education in the school context, very few studies are focused on Technical Education, particularly in the provision of infrastructures such as Technical Schools, workshops, machineries, tools and practical materials. The capital intensive nature of Technical Education was also reviewed. A disparity in the provision of infrastructures to grammar schools in contrast to Technical education, and area of contrast on enrolments was also reviewed.

The position of communities and external/internal Aids towards the funding of education in particular and Technical education in general was reviewed, where it was noted that the two are interwoven in most areas. The constraints impending the management of Technical education in the Northwest Zone and Nigeria in general were also reviewed. The limitation of research work in the area of funding Technical Education was also noted as it was not extensively studied.

These observations provide the uniqueness of the present study. Consequently, the need analysis would enable the Science and Technical Schools Boards, Educational planners and administrators including governments and organizations to effectively contribute towards the effective funding of Technical Education in the Northwest Zone of Nigeria.

CHAPTER THREE

METHODOLOGY

3.1 **Introduction**

The purpose of this chapter is to present the methodology used in data collections which would determine the impact of funding in the management of Technical education in the Northwest Zone. How the adequacy or inadequacy of funding could be related to the management of Technical education system in the Northwest Zone. The chapter provided details on the research design, population, sampling procedures and sample size data collection instruments, validation of instruments, pilot studies, procedures for data collection and data analysis in accordance with Mitchell and Jolley, (2004).

3.2 Research Design

Descriptive survey research design was employed in this study seeking the opinion of respondents on funds provided by the Northwest state governments and the development recorded in the field of technical education. The intent of this research is to determine the cause-and-effect relationship that has occurred in the management of Technical education in the Northwest Zone. As such the generalization of the research findings outside the specific setting is limited. Additionally, establishment of adequacy or inadequacy of funds does not preclude the existence of another link. Numerous variables outside the researcher's control, such as improper utilization of the provided funds, misappropriation, inflation, economic recession, teachers and students factors may have influenced the results. The research findings of this research is specific to the unique situation, event and setting in which it may have occurred.

3.3 Population of the Study

In empirical research, the first step of obtaining a sample is the definition of the total population from which the sample shall be drawn. This implies identifying the characteristics which the members have in common, which will identify each unit as being a member of a particular group. The selection of a problem determines the population. Osuala, (2001) defined population as “all conceivable elements subjects or observations relating to a particular phenomenon of interest to the researcher. Subjects or elements are individual items that make up the population, which may be observed, or physically counted. It forms the entire area or the total number in the area that the research is expected to cover”. Human subjects (participant) that answer research questions in education may consist of Administrators, Educators, Teachers, Professional staff (Supporting staff) in different field or endeavor.

The population for this study consists of Technical educators in the Northwest zone such as all the Administrators, (Executive Secretaries, Directors)in the seven (7) Science and Technical Schools Boards and twenty seven (27) Technical Schools in the seven (7) states of the Northwest zone comprising of Kano, Katsina, Kaduna, Kebbi, Sokoto, Jigawa, and Zamfara states totaling 832 participants. The breakdown of the population is as follows:

3.3.1 Population of the Study

Breakdown of the Research Population per State

S/No.	States	No. of Tech. Schools	No. of Administrators at the Science Board HQ	No. of Tech Teachers, including Principal and V/Principal (29 per Sch.)
1	Kano State	9	7	261
2	Katsina State	4	7	116
3	Sokoto State	4	7	116
4	Jigawa State	4	7	116
5	Kaduna State	2	7	58
6	Kebbi State	2	7	58
7	Zamfara State	2	7	58
		27 Schools	**49**	783 Teachers
				Administrators 49
				Teachers 783
		Total Population		**832**

Breakdown of Administrators at the Science and Technical Schools Board of each State that are part of the population

Position at the STSB	Number
Executive Secretary	1
Director in charge of Technical Schools	1
Director of Administration	1
Director Finance	1
Director of Works	1
Director of Inspectorate	1
Director of Training/Manpower	1
Total	7 per State X 7 States = **49** Administrators

Breakdown of Technical Teachers at each Technical School Level that are part of the Population

Position in the School	Number
Principal	1
Vice Principal	2
Tech. Teachers from all the trades in the school	26
Total	29 X 27 Technical Schools in the Zone = **783**

3.3.2 SAMPLE SIZE

Number of Technical Teachers Sampled to participate in the study

S/N	States	Total No. of Technical Schools	No. Tech. Schools purposively Selected as Samples	No. of Tech Teachers selected as sample from each school	Total Tech Teacher purposively selected per State as Sample
1	Kano State	9	5	29	145
2	Katsina State	4	2	29	58
3	Sokoto State	4	2	29	58
4	Jigawa State	4	2	29	58
5	Kaduna State	2	1	29	29
6	Kebbi State	2	1	29	29
7	Zamfara State	2	1	29	29
		27	**14**	**203**	**406**

Total Technical Teachers selected as Samples from all the States in the Northwest Zone is: 406

All the Administrators of the STSB selected as sample from each State of the Northwest Zone

S/N	States	Administrators
1	Kano State	7
2	Katsina State	7
3	Sokoto State	7
4	Jigawa State	7
5	Kaduna State	7
6	Kebbi State	7
7	Zamfara State	7
TOTAL NO. OF ADMINISTRATORS		**49**

Total number of samples size selected for the study comprising Administrators and Teachers from each State of the Northwest Zone.

1	No. of Administrators of the STSB selected as Sample	49
2	No. of Tech. Teachers selected as sample	406
3	Total No. of samples	455

sample size of 455 participants were purposively selected to represent a population of 832 from the 7 states of the Northwest Zone.

As earlier explained simple clustered and purposive techniques was employed in selecting the sample participants for this study in consonance with Ellis, (1994), who explain that “in simple clustered sampling, a researcher picks a few clusters and then collects data from many of the

subjects comprising of each of those clusters. Naturally, this sampling procedure will normally approximate a representative sample".

3.3.3 Sampling Technique

The Research Adviser 2006 table was employed in determining the sample size. A simple clustered and purposive sampling procedure was employed in selecting sampled participants for this study. The researcher selected all the administrators at the STSB headquarters of all the seven states of the Northwest Zone and half the number of Technical Schools from each state purposively were selected where all the Technical teachers of the selected schools including Principals and Vice Principals formed the sample for the study.

3.4 Data Collection Instrument

This study employed a descriptive survey design in accordance with (Ajala 1996). A self-developed structured close ended questionnaire named as (questionnaire on impact of the funding in management of Technical Education (QFMTECH) was developed for data collection. The questionnaire is divided into five sections. Section 'A' comprises of items on the participants personal data of years of working experience, qualifications and area of specialization. It is designed to ascertain the suitability of the respondents to provide the desired information as it is considered that the longer the years of service the more experienced the respondent will be on the subject. Similarly, the higher his qualification and area of specialization could enable him attest to the adequacy of teaching equipment and materials required to teach a particular trade. Sections B, C, D and E are structured in the Likert scale format for respondents to express their satisfaction or dissatisfaction with items related to the respondent's opinion on impact of funding of Technical education by the Governments of the

Northwest Zone in section B Respondent's opinion on community participation in the funding of Technical Education in the Northwest Zone in section C" Respondent's opinion on participation of international organizations in the funding of Technical education in the Northwest Zone in section D", and Respondent's opinion on Government/community attitude towards the funding of Technical Education in the Northwest Zone in section E". Respondents are required to tick anyone of the boxes that represented their opinion about the question as either; Strongly Agreed = S.A; Agreed = A; Disagreed = D; and Strongly Disagreed = SD. These items are scored as 4,3,2,1 on the Lickert scale.

In order to establish the validity and reliability of the self-designed questionnaire as a valid instrument of research, the questionnaire was subjected to a validity and reliability test.

3.5 Validation of the Instrument

The validation of the instrument used in research is necessary so as to establish its validity and reliability according to Isaac and Michael (1997). It also enables necessary corrections, Gall, Borg and Gall (1996).

The validity of the instrument used in this study (QFMTECH) was established using the face validity process. A draft of the self-designed questionnaire was presented to the research supervisor who examined it and offered corrections that were effected. The corrected version was scrutinized by a panel of Professors in the Department of Education, Bayero University who are experts in the fields of tests and measurements, research and statistics. Hence the face, construct and criteria validity of the instrument was established. Suggestions and corrections from the experts were noted and effected.

3.5.1 Validity of Pilot Study

Based on the assertion by Balarabe (2004) that "a pilot study is run with limited number of participants, 27 teachers from Government Technical College Birnin-Kudu and the 7 administrators from the Science and Technical Schools Board was used for the study on the test re-test basis. The Technical teachers used in the pre-test are not from the sample participating schools.

3.5.2 Reliability of the Instrument

Reliability and validity are essential to the effectiveness of any-data-gathering instrument according to Sagir and Abbas (2005).

To establish the reliability of the questionnaire (QFMTECH) used in this study for the purpose of data gathering, a pilot study was conducted in one of the Technical Schools in Jigawa State. The scores of the pilot study were tallied and the results presented below.

3.6 Procedure for Data Collection

To ensure effective distribution, the researcher administered the questionnaire personally with the aid of the principal. Each questionnaire carried an instruction on how it would be completed. A letter from the researcher accompanied each questionnaire stating the purpose of the research and inviting each participant to participate while assuring them of confidentiality on any information provided by them for the purpose of the study. The researcher with the help of the principal and Executive Secretary of the STSB retrieved the copies of the questionnaire.

Table 3.6a Samples Selected for the Pilot Study

The sample used for the pilot study comprised of the following participants.

The Executive Secretary STSB	1
Directors of the STSB HQ	6
Principal Govt. Tech College B/K	1
Vice Principal	1
Heads of Technical Departments	5
Teachers of Technical Subjects	20
Total Samples	**34**

3.7 PROCEDURES FOR DATA ANALYSIS

In analyzing the scores obtained in the pilot study, a split half process was applied, where the scores of each of the four sections were splited into even end odd numbers and the two scores were run in an SPSS programme using spearman-Brown coefficient and the result established the reliability of each of the four sections of the questionnaire.

Reliability for Section B (Funding of Technical Education by State Governments of the Northwest Zone)

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.769
		N of Items	4[a]
	Part 2	Value	.905
		N of Items	4[b]
		Total N of Items	8
Correlation Between Forms			.712
Spearman-Brown Coefficient	Equal Length		.832
	Unequal Length		.832
Guttman Split-Half Coefficient			.807
a. The items are: Item One, Item Two, Item Three, Item Four, Item Five. b. The items are: Item Six, Item Seven, Item Eight, Item Nine, Item Ten.			

The internal consistency on the funding of Technical Education by the state Governments (Section B) was 0.832 as per Spearman-Brown coefficient of equal length, indicating a significant correlation coefficient, so this item of the instrument is reliable to be applied for research work.

Reliability for Section C (Community Participation in the funding of Technical Education)

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.587
		N of Items	3[a]
	Part 2	Value	.896
		N of Items	3[b]
	Total N of Items		6
Correlation Between Forms			.653
Spearman-Brown Coefficient	Equal Length		.790
	Unequal Length		.790
Guttman Split-Half Coefficient			.778
a. The items are: Item One, Item Two, Item Three, Item Four, Item Five. b. The items are: Item Six, Item Seven, Item Eight, Item Nine, Item Ten.			

The internal consistency on community participation in the funding of Technical Education (section C) was 0.790 of equal length, indicating a significant correlation coefficient, so the item of the instrument is reliable for application in research work.

Reliability for Section D (International Organizations Participation in the funding of Technical Education)

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.627
		N of Items	2[a]
	Part 2	Value	.342
		N of Items	2[b]
	Total N of Items		4
Correlation Between Forms			.572
Spearman-Brown Coefficient	Equal Length		.727
	Unequal Length		.727
Guttman Split-Half Coefficient			.723
a. The items are: Item One, Item Two, Item Three, Item Four, Item Five. b. The items are: Item Six, Item Seven, Item Eight, Item Nine, Item Ten.			

The internal consistency on international organizations participation in the funding of Technical education (section D) was 727 of equal length, indicating a significant correlation coefficient. The item of the instrument is therefore reliable for application in research work.

Reliability for Section E (Government and Community attitude to funding of Technical Education)

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.762
		N of Items	2[a]
	Part 2	Value	.788
		N of Items	2[b]
	Total N of Items		4
Correlation Between Forms			.911
Spearman-Brown Coefficient	Equal Length		.953
	Unequal Length		.953
Guttman Split-Half Coefficient			.953
a. The items are: Item One, Item Two, Item Three, Item Four, Item Five. b. The items are: Item Six, Item Seven, Item Eight, Item Nine, Item Ten.			

The internal consistency on governments and communities attitude towards the funding of Technical education was 0.953 of equal length, indicated a significant correlation coefficient. The item of the instrument is therefore reliable to be used in carrying out the research work

Conclusion

The results of the collected data were analysed using the Spearman-Brown Coefficient models to analyse the responses of the respondents to Section B, C, D and E of the QFMTECH at a 0.01 level of significance. A reliability test through split – half reliability test showed the internal consistency on the funding of Technical education by state governments (section B) was 0.832 as Spearman-Brown Coefficient of equal length indicating a significant correlation, so this section of the instrument is reliable to be applied for research work. Also section C was 0.790, Section D was 0.727 and section E was 0.953 of equal length, all of them indicating a significant correlation and therefore reliable to be used in research work.

Based on the face validity report and the reliability indices, the questionnaire is adjudged valid and reliable. Hence it is concluded that the instrument could be used for the actual study.

CHAPTER FOUR

Data Presentation and Analysis

4.1 Introduction

The summary of respondents Bio-data, data analyses and summary of findings and discussion of results was presented in this chapter. It makes a comprehensive presentation of the data collected on the study of impact of funding in the management of Technical education in Northwest Zone of Nigeria. The data was analysed using the descriptive statistics of percentage, means and standard deviations. This was with a view to answer the research questions 1, 2, 3, 4, and 5 respectively.

4.2 Data Presentation

This section summarized the obtained data from respondents on funding and the management of Technical Education in the Northwest Zone of Nigeria. To interpret the data, the frequency of responses were obtained, ranked, tabulated and presented. Statistical means was employed to answer the research question 1, 2, 3, 4, and 5. The observed responses of Administrators and Technical teachers were obtained and tabulated. Each question was stated in such a way that agreement indicated adequacy of funding or infrastructures while disagreement indicates inadequacy. The Likert type of measuring scale or summated attitudinal scale was used where the subjects responded with varying degree of intensity on the 4 level scale range from strongly agree to strongly disagree. Respondents had a choice of strongly agree, agree, disagree and strongly disagree. In order to qualify these responses and for economy of space in tables, a nominal scale was applied to the Likert scale. Strongly agree = 4, Agree =3, Disagree = 2, Strongly disagree = 1. Because each question was worded as to assume adequacy, numerically high “agree” scores equate to high adequacy for each question. Low scores, or disagreement

equate to low adequacy. Each research question from B, C, D and E were subdivided into 10 items with each item representing one segment of the research question. Each individual item is presented in table format with the percentage of the respondents reporting each adequacy level.

4.3 Data analysis:

Rating of working experience as Administrators/Technical teacher

Range	Frequency	Percentage	Cumulative Percentage
1 -5 Years	91	20.0	20.0
6 – 10 years	148	32.5	52.5
11 – 15 years	139	30.5	83.1
16 – 20 years	36	16.7	99.8
21 - and above	1	0.2	100.0
Total	**455**	**100%**	**100%**

The table above presented the sampled respondents' years of working experience in the Administration and teaching of Technical subjects, which comprised 49 Administrators of the Science and Technical Schools Board (STSB) and 406 Technical teachers and Principals/Vice Principals from the sampled Technical Schools from the 7 states of the Northwest Zone making a total of 455 samples whose working experience ranges from 1 -5 years representing 98 or 20%; 6 -10 years representing 148 of 32.5%, 11 -15 years representing 139 of 30.5%; 16 - 20 years representing 76 samples of 16.7% and 21 years and above representing only 1or 0.2%.

Highest Academic Qualification of Administrators and Technical teachers

QUALIFICATIONS	COUNT	PERCENTAGE
Others	19	4.2
WAEC	40	8.8
OND	67	14.7
NCE	76	16.7
HND	75	16.5
B.Ed Tech/Bsc Tech. Eng	159	34
M.Ed Tech/Msc Tech. Eng	19	4.2
Total	**455**	**100**

The table above presented the highest academic qualifications of the 49 administrators and 406 Technical teachers totaling 455 participants. From the breakdown, 19 participants representing 4.2% have other qualifications while 76 participants or 16.7% have National Certificate in Education Technical. 159 participants or 34% have Bachelor degree in Education Technical or Bachelor of Science degree in Technology or Engineering; 19 respondents or 4.2% have a Master degree in Education Technical or Science degree in Technology or Engineering; 40 participants or 8.8% have a West African Examination Council (WAEC) or West African School Certificate (WASC) or City and Guilds (C&G); 67 participant or 14.7% have an ordinary diploma while 75 participants or 16.5% have a Higher National Diploma as their highest qualifications.

4.3.1 Answer to Research questions 1 to 5

Section B: Administrators' and teachers' opinion on funding of technical education by state governments of the Northwest Zone of Nigeria.

S/N	RESEARCH QUESTIONS	Frequencies & percentages (%)			Mean	Std. Deviation
1	Fund allocated by the government to the Science and Technical Schools Board are adequate for the implementation of Technical education program.	SA	1	0.2	1.5956	.5465
		A	7	1.5		
		DA	251	55.2		
		SD	195	42.9		
2	The adequacy of fund allocated to the Science and Technical Schools Board has impacted on the development of Technical Education in the state	SA	1	0.2	1.5956	.5741
		A	15	3.3		
		DA	201	44.2		
		SD	237	52.1		
3	The adequacy of fund had enabled the Science and Technical Schools Board to provide more infrastructural facilities to the Technical Schools in the state.	SA	2	0.4	1.5319	.5849
		A	15	3.3		
		DA	201	44.2		
		SD	237	52.1		
4	The adequacy of fund has enabled the provision of adequate workshops and equipment required for the teaching of Technical subjects in the State	SA	3	0.7	1.5121	.6005
		A	16	3.5		
		DA	192	42.2		
		SD	244	53.6		
5	The adequacy of fund has enabled the procurement of necessary tools and teaching materials required in the Technical Schools.	SA	2	0.4	1.6088	.5980
		A	21	4.6		
		DA	229	50.3		
		SD	203	44.7		
6	The adequacy of fund has enabled the recruitment of qualified and skilled Technical teachers required in the Technical Schools	SA	4	0.9	1.5560	.6337
		A	23	5.1		
		DA	195	42.9		
		SD	233	51.2		
7	The adequacy of fund has enabled the training and retraining of Technical teachers on modern teaching methodologies	SA	2	0.4	1.5429	.5841
		A	15	3.3		
		DA	211	46.4		
		SD	227	49.9		
8	The adequacy of fund has facilitated the organizing of seminars and workshops for Technical teachers in the Technical Schools	SA	2	0.4	1.5385	.5919
		A	17	3.7		
		DA	205	45.1		
		SD	231	50.8		
9	The adequacy of fund has enabled the provision of adequate Examination materials that enabled majority of graduating students to pass their NABTEB Examination with 5 Credits and above in the State.	SA	1	0.2	1.5451	.5840
		A	18	4		
		DA	209	45.9		
		SD	227	49.9		
10	The adequacy of fund has enabled the graduation of skilled students that are readily employable or self-employed after graduation from the Technical Schools.	SA	3	0.7	1.5077	.5931
		A	14	3.1		
		DA	194	42.9		
		SD	244	53.6		

From the above table it is indicated that in all the statements the level of disagreement is higher with the largest percentage, meaning that the funds provided for the management of technical education is inadequate. The means were also found to be below the average mean of 2.5.

Section C: Administrators and teachers opinion on community/PTA participation in the funding of technical education in the Northwest zone of Nigeria.

S/N	RESEARCH QUESTIONS	Frequencies & percentages (%)			Mean	Std. Deviation
1	Local Community, P.T.A, Old Boys Associations and indigenous Companies have made financial contributions to the development of Technical Education in the state.	SA	0	0	1.7011	.5338
		A	17	3.7		
		DA	285	62.6		
		SD	238	33.6		
2	Construction of new Workshops, classrooms or hostels in the Technical Schools.	SA	0	0	1.5319	.5126
		A	3	0.7		
		DA	236	52.1		
		SD	216	47.5		
3	Furnishing of classrooms and offices in the Technical Schools.	SA	0	0	1.6396	.6277
		A	37	8.1		
		DA	217	47.7		
		SD	201	42.2		
4	Feeding of students in the Technical Schools.	SA	0	0	1.5143	.5220
		A	5	1.1		
		DA	224	49.2		
		SD	226	49.7		
5	Renovation of dilapidated structure/facilities in the Technical Schools.	SA	1	0.2	1.5714	.6216
		A	29	6.4		
		DA	199	43.7		
		SD	226	49.7		
6	Sponsoring of Technical Teachers on in-service training.	SA	0	0	1.4703	.5212
		A	5	1.1		
		DA	204	44.8		
		SD	246	54.1		
7	Provision of Teaching materials to the Technical Schools.	SA	0	0	1.5516	.5524
		A	13	2.9		
		DA	225	49.5		
		SD	217	47.7		
8	Provision of tools and machinery needed in the Technical Schools.	SA	0	0	1.4989	.5305
		A	7	1.5		
		DA	213	46.7		
		SD	235	51.6		
9	Provision of Examination materials and students industrial working experience (SIWES) in their companies and industries.	SA	0	0	1.4659	.5294
		A	7	1.5		
		DA	198	43.5		
		SD	250	54.9		
10	Employment of eligible students on graduation from the Technical Schools.	SA	0	0	1.4879	.5547
		A	10	2.2		
		DA	199	43.7		
		SD	245	53.8		

The finding of this study reveals that only less percentage (%) of the respondents were of the view that Local community, PTA, Old Boys Associations and indigenous companies have made financial contributions to the development of technical education in the state, whereas the highest percentage (%) of the respondents disagree with all the statements. By implication, the study reveals that community, PTA, Old Boys Associations and indigenous companies have not made any meaningful financial contributions to the development of technical education in the state.

Section D: Administrators and teachers opinion on the participation of International Organizations in the funding of technical education in the Northwest zone of Nigeria.

S/N	RESEARCH QUESTIONS	Frequencies & percentages (%)			Mean	Std. Deviation
1	The science and Technical Schools Board received grants/aids from international Organizations such as OECD, UNESCO, USAID and others, towards the funding of developmental projects in the Technical Schools.	SA	4	0.9	1.7692	.5072
		A	6	1.3		
		DA	326	71.6		
		SD	119	26.2		
2	The Science and Technical Schools Board have sought and got financial aid from international organizations for the development of Technical Education in the state.	SA	2	0.4	1.5407	.5413
		A	4	0.9		
		DA	232	51		
		SD	217	47.7		
3	Teachers under the Science and Technical Schools Board were sponsored on in-service by international organizations Aids.	SA	1	1.1	1.5956	.5259
		A	5	56.7		
		DA	258	42		
		SD	191	52.1		
4	International organizations have built more Technical Schools by direct labour in the state.	SA	2	0.4	1.5473	.5242
		A	0	0		
		DA	243	53.4		
		SD	210	46.2		
5	International organizations have supplied tools and Teaching materials required in the Technical Schools in the state.	SA	1	0.2	1.6176	.5926
		A	23	5.1		
		DA	232	51		
		SD	199	43.7		
6	Technical Teachers in the state were sponsored for further studies on in-service by International organizations.	SA	2	0.4	1.4901	.5467
		A	5	1.1		
		DA	207	45.5		
		SD	241	53		
7	International organizations have conducted/sponsored seminars and workshops for Technical Teachers in the state.	SA	1	0.2	1.5604	.5749
		A	16	3.5		
		DA	220	48.4		
		SD	218	47.9		
8	International organizations have sponsored Students of Technical Schools on students Industrial Working Experience (SIWES) in companies and industries.	SA	1	0.2	1.4857	.5302
		A	4	0.9		
		DA	210	46.2		
		SD	240	52.7		
9	International organizations have sponsored students on exchange program in foreign Technical Schools to expand the knowledge of Technical School students of the state.	SA	0	0	1.7011	.5338
		A	17	3.7		
		DA	285	62.6		
		SD	238	33.6		
10	International organizations have assisted graduating students to secure employment in foreign organizations or set up a personal enterprise in the state.	SA	5	1.1	1.5407	.5805
		A	5	1.1		
		DA	221	48.6		
		SD	224	49.9		

The above table shows that in all the statements the majority of the respondents disagreed that the International Organizations are contributing meaningfully in the management of technical education in the Northwest zone of the country. The means were also found to be below the average mean of 2.5 in all the statements.

Section E: Administrators and teachers opinion on the attitude of state government and community towards the funding of technical education in the state of the Northwest Zone.

S/N	RESEARCH QUESTIONS	Frequencies & percentages (%)			Mean	Std. Deviation
1	State government/community gives more priority to grammar schools over Technical schools in terms of funding in the state.	SA	255	56.7	3.4615	.7317
		A	166	36.5		
		DA	14	3.1		
		SD	17	3.7		
2	Grammar School education is more recognized by government and community than Technical Education in the state.	SA	179	39.3	3.2945	.6969
		A	249	54.7		
		DA	9	2		
		SD	18	4		
3	State government/community considers Technical Education as inferior to grammar Education hence does not fund it adequately in the state.	SA	203	44.6	3.2835	.8188
		A	210	46.2		
		DA	10	2.2		
		SD	32	7		
4	State government/community does not provide adequate infrastructures required in the Technical Schools of the state.	SA	196	43.1	3.3385	.6959
		A	234	51.4		
		DA	8	1.8		
		SD	17	3.7		
5	State government/community does not provide adequate tools and teaching materials required for proper teaching and learning in the Technical Schools of the state.	SA	198	43.5	3.3670	.6464
		A	237	52.1		
		DA	9	2		
		SD	11	2.4		
6	State government/community does not pay much attention to the provision of adequate Technical teachers in the Technical Schools of the state.	SA	206	45.3	3.3714	.6804
		A	227	49.9		
		DA	7	1.5		
		SD	15	3.3		
7	State government/community does not accord priority to the training of Technical teachers on in-service training in the state.	SA	199	43.7	3.3626	.6623
		A	235	51.6		
		DA	8	1.8		
		SD	13	2.9		
8	State government/community does not accord priority to organizing workshops and seminars for Technical teachers in the state.	SA	202	44.4	3.3692	.6669
		A	233	51.2		
		DA	6	1.3		
		SD	14	3.1		
9	State government/community does not provide adequate materials for students examination/industrial working experience in the state.	SA	203	44.6	3.3538	.6993
		A	227	49.9		
		DA	8	1.8		
		SD	17	3.7		
10	State government/community does not encourage Technical School graduates by providing them with job opportunity on graduation or grants to set up private business in the state.	SA	192	42.2	3.3496	.6511
		A	243	53.4		
		DA	7	1.5		
		SD	13	2.9		

The finding of the study also reveals that the majority of the respondents agreed to the statements that grammar schools are given more priority than technical schools by both the governments and the communities. Also the communities and the state governments provide less financial concern to technical schools and teachers in their respective states.

4.3.2 Hypotheses testing

HO_1 There is no significant relationship between the funds provided for the management of Technical Education in the Northwest Geo-political Zone of Nigeria and the provisions of infrastructural facilities in the zone.

Showing the relationship between Funding and procurement of tools for the management of Technical Education in the Northwest Geo-political Zone of Nigeria

Variables	Number	Pearson Correlation 'r' value	Remarks at 0.05 level of Sig.
Funding and Procurement of tools	455	0.121	N.S

N. S – Not Significant

From the above table it is observed that the calculated 'r' value is 0.121 which indicated insignificant level of relationship between the funding and the procurement of tools for the management of Technical Education in the Northwest Geo-political Zone of Nigeria. Thus, there is low level of relationship. Therefore, the null hypothesis is retained.

HO_2 There is no significant relationship between the funds provided for the management of Technical Education in the Northwest Geo-political Zone of Nigeria and the procurement of tools for practical works in the zone.

Showing the relationship between Funding and the provision of infrastructural facilities for the management of Technical Education in the Northwest Geo-political Zone of Nigeria

Variables	Number	Pearson Correlation 'r' value	Remarks at 0.05 level of Sig.
Funding and the provision of infrastructural facilities	455	0.158	N.S

N. S – Not Significant

From the above table it is observed that the calculated 'r' value is 0.158 which indicated insignificant level of relationship between the funding and the provision of infrastructural facilities for the management of Technical Education in the Northwest Geo-political Zone of Nigeria. Thus, there is low level of relationship. Therefore, the null hypothesis is retained.

HO_3 There is no significant relationship between the funds provided for the management of Technical Education in the Northwest Geo-political Zone of Nigeria and the staff developmental programmes in the zone.

Showing the relationship between Funding and staff developmental programmes for the management of Technical Education in the Northwest Geo-political Zone of Nigeria

Variables	Numbers	Pearson Correlation 'r' value	Remarks at 0.05 level of Sig.
Funding and staff developmental programmes	455	0.058	N.S

From the above table it is observed that the calculated 'r' value is 0.058 which indicated insignificant level of relationship between funding and the staff developmental programmes for the management of Technical Education in the Northwest Geo-political Zone of Nigeria. Thus, there is low level of relationship. Therefore, the null hypothesis is retained.

HO_4 There is no significant relationship between Communities' participation and the provision and management of facilities for the management of Technical Education in the Northwest Geo-political Zone of the Country.

Showing the relationship between communities' participation and the provision and management of facilities for the management of Technical Education in the Northwest Geo-political Zone of Nigeria

Variables	Number	Pearson Correlation 'r' value	Remarks at 0.05 level of sig.
Communities' participation and the provision and management of facilities	455	0.198	N.S

N. S – Not Significant

From the above table it is observed that the calculated 'r' value is 0.198 which indicated insignificant level of relationship between communities' participation and the provision and management of facilities for the management of Technical Education in the Northwest Geo-political Zone of Nigeria. Thus, there is low level of relationship. Therefore, the null hypothesis is retained.

4.4 Summary of major findings

The summary of findings from the data presented and analyzed on the impact of funding in the management of technical education in the Northwest zone revealed the following findings:

1. Those funds provided for the management of Technical Education in the Northwest Geo-political Zone of Nigeria are grossly inadequate for the management of technical education.
2. That there is dearth of provision of infrastructural facilities for the management of Technical Education in the Northwest Geo-political Zone of Nigeria.
3. That Funds provided for the procurement of tools for practical works in the Technical Schools of Northwest Geo-political Zone of the Country are meager in amount and this is negatively affecting practical works in most of the workshops in the schools under study hence affecting the quality of the graduates from these schools.
4. That Staff developmental programmes in forms of seminars and workshops are not periodically organized for the teachers of Technical Schools in the Zone under study, thus sufficient funds are not provided for that purpose and the quality of teaching is grossly affected.
5. The Local communities such as PTAs, Old Students Associations and the likes have not made significant contributions financially or through the maintenance of infrastructures, provision of teaching materials or sponsoring of teachers on in-service which would have assisted towards the management of Technical education in the Northwest Zone.

4.5 Discussions

The data collected and analyzed for this research work on the impact of funding in the management of Technical education in the Northwest zone, upon which discussions and conclusions were drawn have provided some insight on the position of funding and the management of Technical education in the Northwest Zone.

Responses from section B which answered research questions 1 and 2, which sought to find out if funds allocated by government to the Science and Technical Schools Board are adequate for the implementation of Technical education programme; and if adequate infrastructural facilities such as workshops and machineries required for effective teaching of technical subjects are provided in the technical schools of the Northwest Zone found out that the funds allocated to the Science and Technical Schools Board is grossly inadequate for the implementation of Technical education in the zone. This finding was in consonance with the view of Birniwa (2001) who opined that "Education generally suffers from lack of adequate funds to run it effectively. Technical education appears to have greater share of the problems of funding because of its being capital intensive". The researcher's opinion on this notion is that adequate funding is required for any meaningful development to be recorded in the area of implementing Technical education programme in the Northwest Zone of Nigeria. Similarly item 3 answered research question 2 when it was found that 96.3% of the responded agreed that inadequate funds have not enabled the Science and Technical Schools Boards to provide more infrastructural facilities to the Technical schools in the Northwest Zone. It is a well known panacea that the management of Technical education hinged greatly on the provision of infrastructures such as more Technical schools, workshops and laboratories required for the effective teaching of the technical courses, where such facilities are not available or inadequate, there shall be no meaningful management

of Technical education in the Northwest Zone. Observations from one of the states in the Northwest Zone by Birniwa (2001) supported this view that "lack of workshops, laboratories and classes hinders proper attainment of Technical education management as most practical works are expected to be carried out in workshops and laboratories". Also Birniwa (2001) was of the opinion that "lack of and obsolete practical materials i.e. (machines, equipments, tools, instruments and consumables), even in places where materials are available they are found to be outdated, obsolete and irrelevant compared to the ones found in the industries where students will eventually work. This greatly affected the quality of Technical education products in Jigawa state". One potent index of evaluating Technical education management in the states is adequacy of infrastructures, teaching materials, tools and facilities necessary for teaching and learning of technical subjects in available technical schools. However, findings on research questions 1 and 2 in section B of the (QFMTECH) showed clearly the inadequacy of funds, infrastructural facilities such as workshops, laboratories, equipments, necessary tools and teaching materials, adequate and qualified teachers, organization of seminars and workshops for staff development in the Technical schools in the Northwest Zone. Lack of these necessary facilities leads to failures in final examinations by students of the technical schools as indicated by responses to items 9 of section B, where 95.8% of the respondents rejected the view that adequate examination materials enabled majority of graduating students to pass their NABTEB examination with 5 credits and above in the states of the Northwest. The massive rejection of this view indicated the inadequacy of examination materials which lead the students into failure to pass the NABTEB with 5 credits. This same view was shared about Technical education in the Northern state by Thomas and Know (2002) who reported that "it has not been possible to inspect and accredit most Technical colleges, trade schools and vocational centre which are

taking examinations set by the National Business and Technical Education Board (NABTEB) because most of them lack qualified teaching and support staff as well as facilities that are clearly sub-standard". They also noted "inadequate essential facilities especially specialized laboratories/workshop equipments and lukewarm attitude towards the growth of Technical/vocational schools by state governments, many having only two or three Technical schools". Stakeholders also noted that the introductory Technology (ITT) programme introduced to fast track the management of Technical education in all the Junior Secondary Schools of Nigeria have virtually grounded to a halt in most states due to lack of equipment, poor maintenance and lack of properly qualified teachers. All these observations confirmed the assertion that lack of adequate funding and basic infrastructures has greatly impacted on the management of Technical education in the Northwest Zone of Nigeria.

Responses to research question 3 which enquires if sufficient funds are made available by the Management Agencies (STSB) for the training and retraining, seminars and workshops for Technical teachers in the Northwest Zone was indicated in item 7 of section B of the (QFMTECH). 96.3% of the respondents rejected the view that adequacy of funds have enabled the training and retraining of Technical teachers on modern teaching methodologies in item 7, while in item 8, 95.9% of the respondents disagreed that adequacy of funds have facilitated the organizing of seminars and workshops for Technical teachers of the Northwest Zone. According to Abubakar and Abba (2008) who were of the opinion that "Science and technology teachers require constant training through workshop conferences, seminars and given special incentives and in-service training to motivate them to put in their best". In view of the above assertion, the research believes that lack of adequate funds for training and retraining of teachers, in-service training, seminars and workshops could make the Technical teachers in the Northwest Zone to be

indolent and lack the basic knowledge of modern methods of teaching Technical subjects, which in turn will affect the performance of graduating students in their final examination and practical ability if they are to be employed in the industries. This portends the lack of effective management of Technical education in the Northwest Zone of Nigeria.

Another area examined, which relates to funding and the management of Technical education in the Northwest Zone is the issue of community/PTA and old boys associations participation in the funding of Technical education in the Northwest Zone of Nigeria, which formed the research question 3 and section C of the (QFMTECH). Administrators and technical teachers' responses on this section showed that the local communities and old boys have not made financial contributions to the management of Technical education in the Northwest Zone as 96.2% of respondents disagreed with the view in item 1of section C. Also 95% rejected the view that communities/old boys constructed new workshops or student hostels and 91.9% rejected the view of furnishing of classrooms and offices by the PTA/community in item 2 and 3. 98.9% disagreed with the view that PTA and old boys contributed in the feeding of students of Technical schools and 93.4% disagreed that PTA and old boys renovated dilapidated structures/facilities in the schools, 98.9% disagreed on the sponsoring of technical teachers on in-service training and 97.1% disagreed on the provision of teaching materials 98.5% disagreed on the provision of tools and machineries needed in the Technical schools, 98.4% disagreed with the opinion on the provision of examination materials and students industrial working experience (SIWES) in their companies and industries and 97.5% disagreed on the opinion that local communities and indigenous companied provide employment to eligible students on graduation from the Technical schools. Conclusively the respondents indicated by a great merging that Local communities, PTA, old boys association and indigenous companies have not made

financial or material contributions to the effective management of Technical education in the Northwest Zone, which would have positively affected the issue of funding and effective management of Technical education in the Northwest Zone. Birniwa (2001) was of the view that "lack of public enlightment by the governments on the importance of technical education contributed greatly to the failure of technical education in the Northwest zone.

This researcher is of the view that Old students that passed through the technical schools in the zone, indigenous companies that were the consumers of the technical schools products in terms of students and Parent Teachers Associations whose children would have been the beneficiaries have failed in the promotion of Technical education, which is a setback to the management of Technical education in the Northwest Zone.

Section D of the (QFMTECH) examined the participation of international organization such as USAID, OECD and UNESCO in the funding of Technical education in the Northwest zone and sought to know the role played by international organizations towards the funding of Technical education in the Northwest Zone.

Item 1 and 2 of Section D sought to know if the Science and Technical Schools Boards of the Northwest received grants/aids from such organizations as OECD, USAID, UNESCO and others toward the funding of development projects in the Technical schools of the Northwest, where 97.8% of Administrators and Technical teachers disagreed with the view, indicating that the Science and Technical Schools Board does not received any grant from any international organization. Similarly, in item 2, 98.7% of respondents disagreed that the Science and Technical Schools Boards have sought for and got financial aid from international organizations for the management of Technical education in the Northwest Zone. Items 3, 4, 5, 6 and 7 of section D of the analysed Data established that international organizations did not assist in

building more technical schools, no supply tools and teaching materials required in the existing Technical schools. Similarly, they did not sponsor technical teachers from the Northwest zone on in-service training, neither did they organize or conduct seminars and workshops for the management of Technical teachers. Also item 9 and 10 indicated that international organizations did not sponsor technical students on foreign excursions, neither did they assist graduating students to secure employment in foreign organizations from the Northwest Zone. Conclusively, international organizations have not assisted in managing Technical education in the Northwest Zone as much as they might have contributed towards the development of conventional type of grammar educational courses such as French language, English language, Home economics (for girls child etc). Also, the failure of state governments of the Northwest zone or the Science and Technical Schools Boards to enter into collaboration with international organizations for sponsorship of some Technical school programmes, establishment of private Technical schools or procurement of modern infrastructural facilities, tools and teaching materials is another setback in the management of Technical education in the Northwest Zone of Nigeria. This view is shared by Thomas and Nkow (2002) who were of the opinion that "in spite of previous efforts by the World Bank and UNESCO in supplying a few Technical equipments here and there, the states themselves lack the political will to seriously manage Technical education due to the poor attitude and lack of foresight regarding the job opportunities awaiting graduates of this area; nothing has been done to lay foundation for technical education in schools". As earlier observed by this researcher, international organizations are more interested in granting loans and other facilities that would enable the granter determine the political and economic configuration of the debtor nation. To this end, states of the Northwest should reposition Technical education through collaboration with international organizations towards the supply of machineries, tools and

teaching materials that may add value to skill acquisition and management of Technical education.

Responses to section E of the (QFMTECH) which answered research question 5 explain the attitudes of government and community towards the funding of Technical education. Items of this section were set in the affirmative where agreement or disagreement with the items signified the true position of government and community attitude towards Technical education. The higher the "Agree" scores of the responses, the more negative the attitude of government towards Technical education while "disagree" with the item signified a positive attitude of government and community towards Technical education in the Northwest Zone. Item 1 sought to know if government/communities give more priority to Grammar schools over Technical schools I terms of funding. 93.2% of the respondents agreed with the opinion that government/communities give more priority to Grammar schools. This could be seen by the number of Government Secondary Grammar Schools and Community Grammar Schools being built on daily basis by Government and Private (Community) all over the Northwest Zone. While it is not possible for one to point at a new Technical school built by a Government or Community. Responses to items 2 and 3 agreed that grammar schools are more recognized by the government/community while they consider Technical education as inferior to grammar education, hence does not fund it adequately. This opinion was further supported by Osayamnbor and Adokpayi (2008) who were of the view that "The public perception about Technical education in Nigeria is on the decline as a result of less people are interested in such education". Respondents to items 4, 5, 6, 7 and 8 agreed with the assertions that government and community does not provide adequate infrastructures, adequate tools and teaching materials and adequate Technical teachers required in Technical schools of the Northwest Zone and organizing workshops and seminars for teachers.

Also respondents to items 9 and 10 of the research question 5 agreed that government and community in the Northwest zone do not provide adequate materials for students' examination/industrial working experience nor do they encourage Technical schools graduates by providing them with job opportunities on graduation or grants to set up private business. All the above attitudes culminate into problems that would affect the growth and management of Technical education. Conclusively, this researcher agreed with the view of Birniwa (2001) who observed that "lack of proper public enlightenment on the importance of Technical education contributed greatly in the failure of Technical education". The poor attitudes of government towards the management of Technical education in the Northwest Zone might have lead to poor public enlightenment of the community on it and the need for NGOs, communities and private individuals to invest in funding Technical education, commensurate to their investment in conventional grammar schools.

CHAPTER FIVE

SUMMARY, CONCLUSION, RECOMMENDATIONS

5.1 Introduction:

This chapter presents summary, conclusion, recommendations and suggestions for further studies. It is divided into the following sections (a) summary, (b) conclusion, (c) recommendations and (d) suggestions for further studies.

This chapter summarized the contents in the preceding four chapters of this research report. Based on the discussions of the findings in chapter four, conclusion are drawn from the level of adequacy of the funds provided for the management of Technical education in the Northwest Zone. Recommendations and conclusions for professional practice and further research are proffered.

5.2 Summary:

The study focused on the impact of funding in the management of Technical education in the Northwest Zone of Nigeria. It includes background of the study, statement of the problems.

Chapter one was the introduction and background to the study. The background section discussed the impact and adequate or inadequate funding on the management of Technical education in the Northwest Zone of Nigeria. It aimed at analyzing the level of commitment of Governments of Northwest Zone towards effective funding and the management of Technical education in the Zone. Also the contribution of local communities and international organizations towards the funding of Technical education in the Zone was examined. Five objectives identified and five research questions and hypothesis were designed to guide the study and were presented. The significance, scope and delimitation of the study were stated.

In the second chapter, the literature review of the related studies were discussed under the subheadings. Technical education and National development; Funding and management of Technical education; Community and the management of Technical education; and external/internal organizations and management of Technical education. The last section contained review of empirical studies relating to the funding of Technical education.

The third chapter addressed the methodology used for the research. The population for the study comprised of Administrators in-charge of the Science and Technical Schools Board of each state in the Northwest Zone totaling 49 plus 783 Technical teachers including Principals and Vice Principals in the 27 Technical schools in the Northwest Zone, making the total population 832. A sample of 49 Administrators and 406 Technical teachers, making a total of 455 samples were defined and described. The chapter also contained description of the instrument for the study, the validation of the instrument, data collection procedure and procedure of data analysis.

The fourth chapter presented the collected and analyzed data in tables, followed by the interpretations and discussions of findings.

The fifth chapter presented summary of chapters, conclusions and recommendations.

5.3 Conclusions:

The results of this study indicated that despite the innumerable benefits Technical education is designed to offer to the students and the society at large, there are equally a lot of factors militating against it. The sector is bedeviled by poor funding, lack of infrastructural facilities**,** unqualified teachers and poor students' graduates, poorly equipped workshops, laboratories and libraries. These findings are in consonance with the basic assumptions of the study. The study also established that the teachers' inability to impart effective knowledge on their students may

be traced to a number of existing factors like inadequate machineries, equipment, tools, training and retraining of teachers. It is also noted that government and public perception about Technical education in the Northwest Zone is on the decline and as a result, less people are interested in such education. Governments of the Northwest have not prioritize Technical education, that is why NGOs/community do not even know what is happening there and where they will be involved. Similarly the prospects of the students performing well in their graduating examination and acquiring necessary skills can only be bright if they are given the right teaching and practical exposure to enhance their skills that is in demand by the society. However, the observed inadequacies above cannot effectively provide the right exposure. On the whole, the management of Technical education in the Northwest Zone was impaired over a period of time because of these observed inadequacies enumerated.

The researcher over the period of the study drew several conclusions. Recommendations based on the data collected and analyzed on this important topic.

5.4 Recommendations:

Without any iota of doubt, Technical education formed the bedrock of Technological advancement of any society, the Northwest Zone inclusive as such, it should be handled with all seriousness it deserved by the government and community of the Northwest Zone.

5.4.1 Recommendation from the Study

Sequel to the findings from the study, the researcher wished to proffer the following recommendations:

i. The governments of the Northwest Zone should reposition Technical education by providing the necessary facilities in terms of expertise and equipment to realize the

objectives of this type of education. Training and retraining of teachers on modern facilities to meet the present challenges should be a matter of importance at National and state levels.

ii. Individuals should be encouraged and provided with all necessary incentives by government of the Northwest Zone to open and run private Technical schools that can provide competitive and innovative training to students.

iii. One of the key resources required by every institution for effective performance is finance (fund). The traditional sources of funding education in Nigeria have been through government agents complemented by school fees and levies paid by parents/guardians. This source of funding education existed from colonial era up to independence in 1960 and beyond (Adesua, 1981). These sources of funds were found to be inadequate as most educational institutions find it difficult to accomplish their tasks. This therefore called for an innovative way of funding institution of learning, particularly technical schools that are capital intensive. The following are suggested attractive sources of funding Technical education.

a) Public finance:

This strategy involves the use of the public in providing Technical training. Employers should be made to fund direct training to students in different subjects of Technical education. This will help the employer to increase the productivity of graduates that will be readily employable. The government will be involved in maintaining standards of training and curriculum.

b) The use of Tax revenue

Funds such as ETF, Sure P, PTDF and other revenue sources should be directed to provide grants directly to Technical schools to fund strategic programmes and construction of more Technical schools. The matching grant may help the Technical schools to augment the main sources of funds.

c) Enterprise financing

In this case, the enterprise/companies should be made to conduct Technical training of its labour force directly and bear the entire cost of training. This training will be conducted in specialized Technical training schools established by the company with specialized curriculum tailored towards the operation of the company. The graduates shall be absorbed directly into the company and be gainfully employed on graduation. This process will greatly enhance the management of Technical education in the Northwest Zone.

d) Revenue from Businesses

Individual Technical schools should strive to generate revenue by selling some of its services to the communities they are located within. Technical school located in booming commercial centers could design attractive products and services that could be procured by communities and profits made from such arrangement could be used to fund maintenance services, which could enhance effective management of Technical education in the Northwest Zone.

e) Funds from Alumni Associations

Efforts should be made by principals of Technical schools to locate most Alumni student through adverts in Newspapers, Television and Radio announcement.

Programmes aimed at generating revenue for the school shall be designed and funds generated shall be used to finance some developmental projects in the school. This could also enhance the effective management of Technical education in the Northwest Zone.

f) **Private Sector Dual Concept**

The dual system of funding Technical training practiced in Germany is another alternative (Azuka 1991). The scheme is a full time and part time with the training taking place in both the school and the company. The schools partake to teach specific theoretical concept while the practical aspect is provided by the selected company. The company still pays for the training of the students and provides the practical materials while the government provides the teachers.

g) **International Collaborations**

State governments of the Northwest should endeavour to collaborate with international institutions and Agencies that could facilitate the effective funding and management of Technical education in the Northwest Zone, using the Millennium development project as a base.

5.4.2 Recommendations for further studies

This study was limited to establishment of funding and its effect on the management of Technical education in the Northwest Zone. The study was able to establish that the inadequate funding from the state governments to the Science and Technical Schools Board for the implementation of Technical education programme and the failure of the Science and Technical Schools Board, communities, internal and external organizations to augment the allocation from

governments lead to serious under development of Technical education in the Northwest Zone of Nigeria.

Consequently, further investigations might be required in the following strategic areas that would improve the funding and enhance the management of Technical education in the Northwest Zone and Nigeria in general:

1) Study is required in the area of modern approach to the funding of Technical education through collaborative effort with NGO's, OECD, UNESCO and other donor Agencies.
2) Study is also required on the possibility of establishing Private Technical Schools and Universities. This will bolster the number of Technical schools available in Nigeria.
3) Research work is required in the area of modern Technical school syllabus that may facilitate public – private implementation. This will provide a more practical and industrial base approach to the teaching and learning of technical education and enable the graduates to transit easily from school to work.

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APPENDIX I

LETTER OF PERMISSION

APPENDIX TWO
QUESTIONNAIRE ON FUNDING AND THE MANAGEMENT OF TECHNICAL EDUCATION FOR ADMINISTRATORS AND TECHNICAL TEACHERS (QFMTECH)

TO THE RESPONDENT,

I Muhammad Kabir Ado, a PhD student of the Faculty of Education, Bayero University, Kano, hereby solicit your kind assistance towards completing this questionnaire.

The questionnaire is aimed at obtaining information regarding the stated topic and your kind response is hereby solicited. Be rest assured that your response will be confidentially treated and no part of it will be revealed to anybody except for the research purpose.

Thank you for responding.

APPENDIX THREE

LIST OF SCHOOLS

Table of Schools purposively selected as Sample from each State of the Northwest Zone

S/No.	NAME OF STATE	NAME OF SCHOOLS	NO. OF SCHOOLS SELECTES
1	Kano State	GTC Kano GTC Bagauda GTC Wudil GTC Karaye GTC Danbatta	5
2	Katsina State	GTC Funtua GTC Mashi	2
3	Sokoto State	GTC Bafarawa GTC Binji	2
4	Jigawa State	GTC Karkarna GTC Hadejia	2
5	Kaduna State	GTC Kajuru	1
6	Kebbi State	GTC Zuru	1
7	Zamfara State	GTC Kaura Namoda	1
Total			**14**

APPENDIX FOUR
DATA COLLECTION INSTRUMENTS

QUESTIONNAIRE ON FUNDING AND THE MANAGEMENT OF TECHNICAL EDUCATION IN THE NORTHWEST ZONE OF NIGERIA. (QFMTECH)

SECTION A: PERSONAL DATA

INTRODUCTIONS:
Please provide your answers to the questions below by indicating with a tick in the appropriate box and/or fill in the blank space. You are not required to indicate your name in any part of the questionnaire.

1. Position in the Board/School:

   …….

2. Name of State Board:

   …….

3. Area of specialization:

   ……

Please tick in the appropriate boxes provided below as necessary:

4. **Years of working experience:**

i. 1 – 5 - □
ii. 6 – 10 - □
iii. 11 – 15 - □
iv. 21 – above - □

5. **Highest Academic Qualifications:**

i. WAEC/WASC - □
ii. City and Guilds - □
iii. Ordinary National Diploma - □
iv. Higher National Diploma - □
v. B.Ed Technical - □
vi. B.sc Technical/Engineering - □
vii. M. Ed Technical - □
viii. Msc Technical/Engineering - □
ix. NCE Technical - □
x. Any other Qualification - □ Specify please ……

SECTION B: Administrators and Teachers opinion on impact in Funding of Technical Education by State Governments of the Northwest Zone of Nigeria

INSTRUCTION:
Please tick in the appropriate column provided that coincides with your opinion on the questions below:
N.B: -S.A = means Strongly Agreed
A = means Agreed
D.A = means Disagreed
S.DA = means Strongly Disagreed

		4	**3**	**2**	**1**
S/N		**S.A**	**A**	**S.DA**	**D.A**
1.	Fund allocated by the government to the Science and Technical Schools Board are adequate for the implementation of Technical education programme.				
2.	The adequacy of fund allocated to the Science and Technical Schools Board has impacted on the management of Technical Education in the state.				
3.	The adequacy of fund had enabled the Science and Technical Schools Board to provide more infrastructural facilities to the Technical Schools in the state.				
4.	The adequacy of fund has enabled the provision of adequate workshops and equipment required for the teaching of Technical subjects in the State.				
5.	The adequacy of fund have enabled the procurement of necessary tools and teaching materials required in the Technical Schools				
6.	. The adequacy of fund has enabled the recruitment of qualified and skilled Technical teachers required in the Technical Schools				
7.	. The adequacy of fund has enabled the training and retraining of Technical teachers on modern teaching methodologies				
8.	The adequacy of fund has facilitated the organizing of seminars and workshops for Technical teachers in the Technical Schools.				
9.	The adequacy of fund has enabled the provision of adequate Examination materials that enabled majority of graduating students to pass their NABTEB Examination with 5 Credits and above in the State.				
10.	The adequacy of fund has enabled the graduation of skilled students that are readily employable or self employed after graduation from the Technical Schools.				

SECTION C.

Administrators and Teachers opinion on community/PTA participation in the funding of Technical Education in the Northwest Zone of Nigeria

		S.A	A	D.A	S.DA
1.	Local Community, P.T.A, Old Boys Associations and indigenous Companies have made financial contributions to the management of Technical Education in the state.				
	Local Community, P.T.A, Old Boys Associations and indigenous Companies have made contributions to the effective management of Technical Education in the following specific areas: -				
2.	Construction of new Workshops, classrooms or hostels in the Technical Schools.				
3.	Furnishing of classrooms and offices in the Technical Schools.				
4.	Feeding of students in the Technical Schools.				
5.	Renovation of dilapidated structure/facilities in the Technical Schools.				
6.	Sponsoring of Technical Teachers on in-service training.				
7.	Provision of Teaching materials to the Technical Schools.				
8.	Provision of tools and machinery needed in the Technical Schools.				
9.	Provision of Examination materials and students industrial working experience (SIWES) in their companies and industries				
10.	Employment of eligible students on graduation from the Technical Schools.				

SECTION D:
Administrators and Teachers opinion on the participation of International Organizations in the funding of Technical Education in the Northwest Zone.

		4	3	2	1
		S.A	**A**	**D.A**	**SDA**
1.	The science and Technical Schools Board received grants/aids from international Organizations such as OECD, UNESCO, USAID and others, towards the funding of developmental projects in the Technical Schools.				
2.	The Science and Technical Schools Board have sought and got financial aid from international organizations for the management of Technical Education in the state.				
3.	Teachers under the Science and Technical Schools Board were sponsored on in-service by international organizations Aids.				
4	International organizations have built more Technical Schools by direct labour in the state.				
5.	International organizations have supplied tools and Teaching materials required in the Technical Schools in the state.				
6.	Technical Teachers in the state were sponsored for further studies by International organizations.				
7.	International organizations have conducted/sponsored seminars and workshops for Technical Teachers in the state.				
8.	International organizations have sponsored Students of Technical Schools on students Industrial Working Experience (SIWES) in companies and industries.				
9.	International organizations have sponsored students on exchange programme in foreign Technical Schools to expand the knowledge of Technical School students of the state.				
10.	International organizations have assisted graduating students to secure employment in foreign organizations or set up personal enterprises in the state.				

SECTION E

Administrators and Teachers opinion on the attitude of State Government and community towards the funding of Technical Education in the States of the Northwest Zone.

		4	3	2	1
		S.A	**A**	**D.A**	**S.DA**
1.	State government/community gives more priority to grammar schools over Technical schools in terms of funding in the state.				
2.	Grammar School education is more recognized by government and community than Technical Education in the state.				
3.	State government/community considers Technical Education as inferior to grammar Education hence does not fund it adequately in the state.				
4.	State government/community does not provide adequate infrastructures required in the Technical Schools of the state.				
5.	State government/community does not provide adequate tools and teaching materials required for proper teaching and learning in the Technical Schools of the state.				
6.	State government/community does not pay much attention to the provision of adequate Technical teachers in the Technical Schools of the state.				
7.	State government/community does not accord priority to the training of Technical teachers on in-service training in the state.				
8.	State government/community does not accord priority to organizing workshops and seminars for Technical teachers in the state.				
9.	State government/community does not provide adequate materials for students' examination/industrial working experience in the state.				
10.	State government/community does not encourage Technical School graduates by providing them with job opportunity on graduation or grants to set up private business in the state.				

Thank you for responding.

APPENDIX FIVE

RAW DATA

Frequency Table

State

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Jigawa	65	14.3	14.3	14.3
	Kaduna	36	7.9	7.9	22.2
	Katsina	65	14.3	14.3	36.5
	Kano	152	33.4	33.4	69.9
	Kebbi	36	7.9	7.9	77.8
	Sokoto	65	14.3	14.3	92.1
	Zamfara	36	7.9	7.9	100.0
	Total	455	100.0	100.0	

Location/Local Government

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	GTC Bafarawa	29	6.4	6.4	6.4
	GTC Bagauda	29	6.4	6.4	12.7
	GTC Binji	29	6.4	6.4	19.1
	GTC Doguwa	29	6.4	6.4	25.5
	GTC Funtua	29	6.4	6.4	31.9
	GTC Hadejia	29	6.4	6.4	38.2
	GTC Kajuru	29	6.4	6.4	44.6
	GTC Kano	29	6.4	6.4	51.0
	GTC Karkarna	29	6.4	6.4	57.4
	GTC Kaura Namoda	29	6.4	6.4	63.7
	GTC Ungogo	29	6.4	6.4	70.1
	GTC Mashi	29	6.4	6.4	76.5
	GTC Wudil	29	6.4	6.4	82.9
	GTC Zuru	29	6.4	6.4	89.2
	Others	49	10.8	10.8	100.0
	Total	455	100.0	100.0	

Position in the Board/School

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PRINCIPAL	14	3.1	3.1	3.1
	VICE PRINCIPAL	28	6.2	6.2	9.2
	TEACHER	364	80.0	80.0	89.2
	EXECUTIVE SECRETARY	7	1.5	1.5	90.8
	DIRECTOR IN CHARGE OF TECHNICAL SCHOOLS	7	1.5	1.5	92.3
	DIRECTOR OF ADMINISTRATION	7	1.5	1.5	93.8
	DIRECTOR OF FINANCE	7	1.5	1.5	95.4
	DIRECTOR OF WORKS	7	1.5	1.5	96.9
	DIRECTOR OF INSPECTORATE	6	1.3	1.3	98.2
	DIRECTOR OF TRAINNING/MANPOWER	6	1.3	1.3	99.6
	OTHERS	2	.4	.4	100.0
	Total	455	100.0	100.0	

Name of State Board

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SCIENCE AND TECHNICAL STATE BOARD JIGAWA	101	22.2	22.2	22.2
	SCIENCE AND TECHNICAL STATE BOARD KADUNA	36	7.9	7.9	30.1
	SCIENCE AND TECHNICAL STATE BOARD KATSINA	65	14.3	14.3	44.4
	SCIENCE AND TECHNICAL STATE BOARD KANO	152	33.4	33.4	77.8
	SCIENCE AND TECHNICAL STATE BOARD KEBBI	36	7.9	7.9	85.7
	SCIENCE AND TECHNICAL STATE BOARD SOKOTO	65	14.3	14.3	100.0
	Total	455	100.0	100.0	

Area of Specialization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	INDUSTERIAL ENGINEERING/ENGINEERING DRAWING	58	12.7	12.7	12.7
	MECHANICAL ENGINEERING/AUTO MOBILE	124	27.3	27.3	40.0
	ELECTRICAL ENGINEERING	45	9.9	9.9	49.9
	BUILDING TECHNOLOGY	53	11.6	11.6	61.5
	QUANTITY SURVEY	1	.2	.2	61.8
	CAPENTARY/WOOD WORK	80	17.6	17.6	79.3
	PUBLIC ADMINISTRATION/SCHOOL ADMINISTRATOR	11	2.4	2.4	81.8
	ACCOUNTANCY/AUDIT	4	.9	.9	82.6
	ADMINISTRATION AND PLANNING	5	1.1	1.1	83.7
	OTHERS	74	16.3	16.3	100.0
	Total	455	100.0	100.0	

Years of Working Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 – 5 YEARS	91	20.0	20.0	20.0
	6-10 YEARS	148	32.5	32.5	52.5
	11 –1 5 YEARS	139	30.5	30.5	83.1
	16-20 YEARS	76	16.7	16.7	99.8
	21 AND ABOVE	1	.2	.2	100.0
	Total	455	100.0	100.0	

Highest Academic Qualifications

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	WAEC/WASC	19	4.2	4.2	4.2
	CITY AND GUIDES	21	4.6	4.6	8.8
	Ordinary National Diploma	67	14.7	14.7	23.5
	Higher National Diploma	75	16.5	16.5	40.0
	B.Ed. Technical	85	18.7	18.7	58.7
	Bsc Technical/Engineering	74	16.3	16.3	74.9
	M.Ed Technical	11	2.4	2.4	77.4
	Msc Technical/Engineering	8	1.8	1.8	79.1
	NCE Technical	76	16.7	16.7	95.8
	Any other Qualification	19	4.2	4.2	100.0
	Total	455	100.0	100.0	

Fund allocated by the Government to the Science and Technical Schools Board are adequate for the implementation of Technical education program.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	195	42.9	42.9	42.9
	Disagree	251	55.2	55.2	98.0
	Agree	7	1.5	1.5	99.6
	Strongly Agree	2	.4	.4	100.0
	Total	455	100.0	100.0	

The adequacy of fund allocated to the Science and Technical Schools Board has impacted on the management of Technical Education in the state

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	238	52.3	52.3	52.3
	Disagree	201	44.2	44.2	96.5
	Agree	15	3.3	3.3	99.8
	Strongly Agree	1	.2	.2	100.0
	Total	455	100.0	100.0	

The adequacy of fund had enabled the Science and Technical Schools Board to provide more infrastructural facilities to the Technical Schools in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	232	51.0	51.0	51.0
	Disagree	206	45.3	45.3	96.3
	Agree	15	3.3	3.3	99.6
	Strongly Agree	2	.4	.4	100.0
	Total	455	100.0	100.0	

The adequacy of fund has enabled the provision of adequate workshops and equipment required for the teaching of Technical subjects in the State

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	244	53.6	53.6	53.6
	Disagree	192	42.2	42.2	95.8
	Agree	16	3.5	3.5	99.3
	Strongly Agree	3	.7	.7	100.0
	Total	455	100.0	100.0	

The adequacy of fund has enabled the procurement of necessary tools and teaching materials required in the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	203	44.6	44.6	44.6
	Disagree	229	50.3	50.3	94.9
	Agree	21	4.6	4.6	99.6
	Strongly Agree	2	.4	.4	100.0
	Total	455	100.0	100.0	

The adequacy of fund has enabled the recruitment of qualified and skilled Technical teachers required in the Technical Schools

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	233	51.2	51.2	51.2
	Disagree	195	42.9	42.9	94.1
	Agree	23	5.1	5.1	99.1
	Strongly Agree	4	.9	.9	100.0
	Total	455	100.0	100.0	

The adequacy of fund has enabled the training and retraining of Technical teachers on modern teaching methodologies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	227	49.9	49.9	49.9
	Disagree	211	46.4	46.4	96.3
	Agree	15	3.3	3.3	99.6
	Strongly Agree	2	.4	.4	100.0
	Total	455	100.0	100.0	

The adequacy of fund has facilitated the organizing of seminars and workshops for Technical teachers in the Technical Schools

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	231	50.8	50.8	50.8
	Disagree	205	45.1	45.1	95.8
	Agree	17	3.7	3.7	99.6
	Strongly Agree	2	.4	.4	100.0
	Total	455	100.0	100.0	

The adequacy of fund has enabled the provision of adequate Examination materials that enabled majority of graduating students to pass their NABTEB Examination with 5 Credits and above in the State.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	227	49.9	49.9	49.9
	Disagree	209	45.9	45.9	95.8
	Agree	18	4.0	4.0	99.8
	Strongly Agree	1	.2	.2	100.0
	Total	455	100.0	100.0	

The adequacy of fund has enabled the graduation of skilled students that are readily employable or self employed after graduation from the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	244	53.6	53.6	53.6
	Disagree	194	42.6	42.6	96.3
	Agree	14	3.1	3.1	99.3
	Strongly Agree	3	.7	.7	100.0
	Total	455	100.0	100.0	

Local Community, P.T.A, Old Boys Associations and indigenous Companies have made financial contributions to the management of Technical Education in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	153	33.6	33.6	33.6
	Disagree	285	62.6	62.6	96.3
	Agree	17	3.7	3.7	100.0
	Total	455	100.0	100.0	

Construction of new workshops, classrooms or hostels in the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	216	47.5	47.5	47.5
	Disagree	236	51.9	51.9	99.3
	Agree	3	.7	.7	100.0
	Total	455	100.0	100.0	

Furnishing of classrooms and offices in the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	201	44.2	44.2	44.2
	Disagree	217	47.7	47.7	91.9
	Agree	37	8.1	8.1	100.0
	Total	455	100.0	100.0	

Feeding of students in the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	226	49.7	49.7	49.7
	Disagree	224	49.2	49.2	98.9
	Agree	5	1.1	1.1	100.0
	Total	455	100.0	100.0	

Renovation of dilapidated structure/facilities in the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	226	49.7	49.7	49.7
	Disagree	199	43.7	43.7	93.4
	Agree	29	6.4	6.4	99.8
	Strongly Agree	1	.2	.2	100.0
	Total	455	100.0	100.0	

Sponsoring of Technical Teachers on in-service training.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	246	54.1	54.1	54.1
	Disagree	204	44.8	44.8	98.9
	Agree	5	1.1	1.1	100.0
	Total	455	100.0	100.0	

Provision of Teaching materials to the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	217	47.7	47.7	47.7
	Disagree	225	49.5	49.5	97.1
	Agree	13	2.9	2.9	100.0
	Total	455	100.0	100.0	

Provision of tools and machinery needed in the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	235	51.6	51.6	51.6
	Disagree	213	46.8	46.8	98.5
	Agree	7	1.5	1.5	100.0
	Total	455	100.0	100.0	

Provision of Examination materials and students industrial working experience (SIWES) in their companies and industries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	250	54.9	54.9	54.9
	Disagree	198	43.5	43.5	98.5
	Agree	7	1.5	1.5	100.0
	Total	455	100.0	100.0	

Employment of eligible students on graduation from the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	245	53.8	53.8	53.8
	Disagree	199	43.7	43.7	97.6
	Agree	10	2.2	2.2	99.8
	Strongly Agree	1	.2	.2	100.0
	Total	455	100.0	100.0	

The Science and Technical Schools Board received grants/aids from International Organizations such as OECD, UNESCO, USAID and others, towards the funding of developmental projects in the Technical Schools.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	119	26.2	26.2	26.2
	Disagree	326	71.6	71.6	97.8
	Agree	6	1.3	1.3	99.1
	Strongly Agree	4	.9	.9	100.0
	Total	455	100.0	100.0	

The Science and Technical Schools Board have sought and got financial aid from International organizations on the management of Technical Education in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	217	47.7	47.7	47.7
	Disagree	232	51.0	51.0	98.7
	Agree	4	.9	.9	99.6
	Strongly Agree	2	.4	.4	100.0
	Total	455	100.0	100.0	

Teachers under the Science and Technical Schools Board were sponsored on in-service by International Organizations Aids.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	191	42.0	42.0	42.0
	Disagree	258	56.7	56.7	98.7
	Agree	5	1.1	1.1	99.8
	Strongly Agree	1	.2	.2	100.0
	Total	455	100.0	100.0	

International Organizations have built more Technical Schools by direct labour in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	210	46.2	46.2	46.2
	Disagree	243	53.4	53.4	99.6
	Strongly Agree	2	.4	.4	100.0
	Total	455	100.0	100.0	

International Organizations have supplied tools and Teaching materials required in the Technical Schools in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	199	43.7	43.7	43.7
	Disagree	232	51.0	51.0	94.7
	Agree	23	5.1	5.1	99.8
	Strongly Agree	1	.2	.2	100.0
	Total	455	100.0	100.0	

Technical Teachers in the state were sponsored for further studies on in-service by International Organizations.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	241	53.0	53.0	53.0
	Disagree	207	45.5	45.5	98.5
	Agree	5	1.1	1.1	99.6
	Strongly Agree	2	.4	.4	100.0
	Total	455	100.0	100.0	

International Organizations have conducted/sponsored seminars and workshops for Technical Teachers in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	218	47.9	47.9	47.9
	Disagree	220	48.4	48.4	96.3
	Agree	16	3.5	3.5	99.8
	Strongly Agree	1	.2	.2	100.0
	Total	455	100.0	100.0	

International Organizations have sponsored Students of Technical Schools on students Industrial Working Experience (SIWES) in companies and industries.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	240	52.7	52.7	52.7
	Disagree	210	46.2	46.2	98.9
	Agree	4	.9	.9	99.8
	Strongly Agree	1	.2	.2	100.0
	Total	455	100.0	100.0	

International Organizations have sponsored students on exchange program in foreign Technical Schools to expand the knowledge of Technical School students of the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	210	46.2	46.2	46.2
	Disagree	238	52.3	52.3	98.5
	Agree	6	1.3	1.3	99.8
	Strongly Agree	1	.2	.2	100.0
	Total	455	100.0	100.0	

International Organizations have assisted graduating students to secure employment in foreign organizations or set up personal enterprises in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	224	49.2	49.2	49.2
	Disagree	221	48.6	48.6	97.8
	Agree	5	1.1	1.1	98.9
	Strongly Agree	5	1.1	1.1	100.0
	Total	455	100.0	100.0	

State Government/community gives more priority to grammar schools over Technical schools in terms of funding in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	17	3.7	3.7	3.7
	Disagree	14	3.1	3.1	6.8
	Agree	166	36.5	36.5	43.3
	Strongly Agree	258	56.7	56.7	100.0
	Total	455	100.0	100.0	

Grammar School education is more recognized by government and community than Technical Education in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	18	4.0	4.0	4.0
	Disagree	9	2.0	2.0	5.9
	Agree	249	54.7	54.7	60.7
	Strongly Agree	179	39.3	39.3	100.0
	Total	455	100.0	100.0	

State Government/community considers Technical Education as inferior to grammar Education hence does not fund it adequately in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	32	7.0	7.0	7.0
	Disagree	10	2.2	2.2	9.2
	Agree	210	46.2	46.2	55.4
	Strongly Agree	203	44.6	44.6	100.0
	Total	455	100.0	100.0	

State Government/community does not provide adequate infrastructures required in the Technical Schools of the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	17	3.7	3.7	3.7
	Disagree	8	1.8	1.8	5.5
	Agree	234	51.4	51.4	56.9
	Strongly Agree	196	43.1	43.1	100.0
	Total	455	100.0	100.0	

State Government/community does not provide adequate tools and teaching materials required for proper teaching and learning in the Technical Schools of the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	11	2.4	2.4	2.4
	Disagree	9	2.0	2.0	4.4
	Agree	237	52.1	52.1	56.5
	Strongly Agree	198	43.5	43.5	100.0
	Total	455	100.0	100.0	

State Government/community does not pay much attention to the provision of adequate Technical teachers in the Technical Schools of the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	15	3.3	3.3	3.3
	Disagree	7	1.5	1.5	4.8
	Agree	227	49.9	49.9	54.7
	Strongly Agree	206	45.3	45.3	100.0
	Total	455	100.0	100.0	

State Government/community does not accord priority to the training of Technical teachers on in-service training in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	13	2.9	2.9	2.9
	Disagree	8	1.8	1.8	4.6
	Agree	235	51.6	51.6	56.3
	Strongly Agree	199	43.7	43.7	100.0
	Total	455	100.0	100.0	

State Government/community does not accord priority to organizing workshops and seminars for Technical teachers in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	14	3.1	3.1	3.1
	Disagree	6	1.3	1.3	4.4
	Agree	233	51.2	51.2	55.6
	Strongly Agree	202	44.4	44.4	100.0
	Total	455	100.0	100.0	

State Government/community does not provide adequate materials for students examination/industrial working experience in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	17	3.7	3.7	3.7
	Disagree	8	1.8	1.8	5.5
	Agree	227	49.9	49.9	55.4
	Strongly Agree	203	44.6	44.6	100.0
	Total	455	100.0	100.0	

State Government/community does not encourage Technical School graduates by providing them with job opportunity on graduation or grants to set up private business in the state.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly Disagree	13	2.9	2.9	2.9
	Disagree	7	1.5	1.5	4.4
	Agree	243	53.4	53.4	57.8
	Strongly Agree	192	42.2	42.2	100.0
	Total	455	100.0	100.0	

APPENDIX SIX

DESCRIPTIVE STATISTICS OF DATA ON FUNDING AND THE MANAGEMENT OF TECHNICAL EDUCATION IN THE NORTHWEST ZONE

SECTION A: Descriptive Statistic of Data

	N	Mean	Std Deviation
Position in the Board School	455	3.3143	1.52949
Name of State Board	455	3.3978	1.65864
Area of Specialization	455	4.4659	3.05501
Years of Working experience	455	2.4482	.99827
Highest Academic Qualification	455	5.3756	2.41724

APPENDIX SEVEN

SECTION B: Administration and teachers opinion on funding of Technical education by state governments of the Northwest Zone of Nigeria

	N	Mean	Std Deviation
Fund allocated by the government to the Science and Technical Schools Board are adequate for the implementation of Technical education program	455	1.5956	.54850
The adequacy of fund allocated to the Science and Technical Schools Board has impacted on the management of Technical education in the state	455	1.5143	.57414
The adequacy of fund had enable the Science and Technical Schools Board provide more infrastructural facilities to the Technical schools in the state	455	1.5319	.58485
Adequacy of fund has enabled the provision of adequate workshops and equipment required for the teaching of Technical subjects in the state	455	1.5121	.60045
Adequacy of fund has enabled the procurement of necessary tool and teaching materials required in the Technical schools	455	1.6088	.59802
Adequacy of fund has enabled the recruitment of qualified and skilled Technical teachers required in the Technical schools.	455	1.5560	..63371
Adequacy of fund has enabled the training and retraining of Technical teachers on modern teaching methodologies.	455	1.5429	.58414
Adequacy of fund has facilitated the organizing of seminars and workshops for Technical teachers in the Technical schools	455	1.5385	.59194
Adequacy of fund has enabled the provision of adequate examination materials that enable majority of graduating students to pass their NABTEB Examination with 5 Credits and above in the state	455	1.5451	.58398
Adequacy of fund has enabled the graduating of skilled students that are readily employable or be self employed after graduation from the Technical schools		1.5077	.59314

APPENDIX EIGHT

SECTION C Administrators and Teachers opinion on Community/PTA participation in the funding Technical education in the Northwest Zone of Nigeria

	N	Mean	Std Deviation
Local community, PTA, Old Boys Associations and indigenous companies have made financial contributions to the effective management of Technical education in the state	455	1.7011	.53377
Construction of new workshops, classrooms or hostels in the Technical schools	455	1.5319	.51259
Furnishing classrooms and offices in the Technical schools	455	1.6396	.62772
Feeding of students in the Technical schools	455	1.5143	.52189
Renovation of dilapidated structures/facilities in the Technical schools	455	1.5714	.62162
Sponsoring of Technical teachers on in-service training	455	1.4703	.52124
Provision of teaching materials to the Technical schools	455	1.5516	.55240
Provision of tools and machineries in the Technical schools	455	1.4989	.53046
Provision of examination materials and students industrial working experience (SIWES) in their companies and industries	455	1.4659	.52936
Employment of eligible students on graduation from the Technical schools	455	1.4979	.55468

APPENDIX NINE

SECTION D Administrators and Teachers opinion on Participation of International Organizations in the funding of Technical education in the Northwest Zone.

	N	Mean	Std Deviation
The Science and Technical Schools Board received grants/aids from International organizations such as OECD, UNESCO, USAID and others, toward funding of developmental projects in Technical schools	455	1.7692	.50715
The Science and Technical Schools Board have sought and got financial aid from international organizations for the management of Technical education in the state	455	1.5407	.54125
Teachers under the Science and Technical Schools Board were sponsored on in-service by international organization Aids	455	1.5956	.52596
International organizations have built more Technical schools by direct labor in the state	455	1.5473	.52416
International organizations have supplied tools and teaching materials required in the Technical schools in the state	455	1.6176	.59266
Technical teachers in the state were sponsored for further studies on in-service by international organizations	455	1.4901	.54673
International organizations have conducted seminars and workshops for Technical teachers in the state	455	1.5604	.57497
International organizations have sponsored students of Technical schools on students industrial working experience (SIWES) in companies and industries	455	1.4857	.53027
International organizations have sponsored students on exchange program in foreign technical schools to expand the knowledge of Technical school students of the state	455	1.5560	.53577
International organizations have assisted graduating students to secure employment in foreign organizations or set up a personal enterprises in the state	455	1.5407	.58052

APPENDIX TEN

SECTION E Administrators and Teachers opinion on the attitude of state governments and community towards the funding of Technical education in the Northwest Zone.

	N	Mean	Std Deviation
State government/community gives more priority to Grammar schools over the Technical school in terms of funding in the state	455	3.4615	.73172
Grammar schools is more recognized by Government and community then Technical education in the state	455	3.2945	.69697
State government/community Technical education as inferior to Grammar education hence does not fund it adequately in the state	455	3.2836	.81887
State government/community does not provide adequate infrastructures requires in the Technical school the state	455	3.3385	.69592
State government/community does not provide adequate tools and teaching material required for proper teaching and learning in the Technical school of the state	455	3.3670	.64642
State government/community does not pay much attention to the provision of adequate Technical teachers in the Technical school of the state	455	3.3714	.68048
State government/community does not accord priority to the training of Technical teachers on in-service training in the state	455	3.3626	.66234
State government/community does not accord priority to organizing workshops and seminars for Technical teachers in the state	455	3.3692	.66698
State government/community does not provide adequate materials for students examinations / industrial working experience in the state	455	3.3538	.69932
State government/community does not encourage Technical school graduates by providing them with job opportunity on graduation or grants to set up private businesses in the state valid N (listwise)	455	3.3495	.65611

APPENDIX 11

	SECTION A				A	SECTION B										SECTION C										SECTION D										SECTION E									
S/No	1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
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151	3		2	3	9	2	1	1	2	2	1	1	2	1	1	1	2	1	1	1	1	2	2	2	2	2	2	2	1	1	1	2	1	2	2	3	4	3	3	3	3	3	4	4	4
152	3		10	3	9	1	2	1	2	2	1	2	1	1	1	1	2	2	2	1	1	2	2	2	1	2	2	1	1	1	2	2	1	1	2	4	3	4	3	3	4	3	4	4	4
153	3		4	3	6	2	1	2	1	1	2	2	2	1	2	2	2	1	1	2	2	1	1	1	1	2	1	2	2	1	1	2	2	2	2	4	3	4	4	3	4	4	4	3	3
154	3		2	2	6	1	1	2	1	2	1	2	2	2	2	2	2	1	1	2	2	2	1	1	2	2	1	2	2	1	1	2	2	2	1	3	4	4	4	3	3	4	4	3	3
155	3		10	2	6	2	1	2	2	2	1	1	2	2	1	2	2	1	1	1	2	2	2	1	1	2	1	2	2	1	2	1	2	2	2	4	3	4	3	4	4	3	4	4	4
156	3		2	2	4	1	2	2	1	1	2	2	1	1	2	2	2	1	2	2	2	1	1	2	2	2	2	1	1	2	2	1	2	1	1	4	3	4	4	4	3	3	3	3	4
157	3		10	3	9	2	2	2	1	1	2	2	1	1	2	2	1	2	1	1	1	1	2	2	2	2	2	2	1	2	2	1	1	1	1	4	3	3	4	3	4	4	3	3	4
158	3		6	1	5	2	2	1	1	2	1	1	2	2	1	2	1	2	2	1	1	1	2	2	1	2	1	2	2	2	2	1	1	1	2	4	3	4	4	4	4	3	3	3	4
159	3		6	1	2	2	2	1	1	2	1	1	1	2	2	2	1	1	1	2	2	2	1	1	2	2	1	2	1	2	1	2	1	1	2	4	3	3	4	4	4	3	3	4	4
160	3		2	1	2	1	1	1	1	2	2	2	2	1	2	2	2	1	2	2	1	1	1	2	2	1	1	2	2	2	2	2	1	2	1	4	3	3	4	4	3	3	3	4	3
161	3		6	2	3	2	1	1	2	2	2	1	1	1	2	2	1	2	2	1	1	2	2	2	1	2	1	2	2	2	1	1	2	1	1	4	3	3	4	3	4	4	3	3	3
162	3		4	2	7	2	2	1	1	1	2	2	1	1	1	2	1	2	2	1	1	2	1	1	1	2	1	2	2	1	1	1	2	2	1	4	3	4	3	3	4	3	3	3	4
163	3		6	1	5	2	2	1	2	2	1	1	2	2	2	1	2	1	1	1	2	2	2	2	1	2	2	1	2	2	1	1	1	2	1	4	4	3	3	4	3	4	4	4	3
164	3		10	2	6	2	1	2	2	1	1	2	2	1	2	2	2	1	1	1	2	2	2	1	2	2	1	2	1	2	1	1	1	2	2	4	4	4	3	3	3	3	4	4	4
165	3		4	2	9	2	2	1	2	2	1	1	1	2	1	2	2	1	2	2	1	2	2	2	1	1	1	1	2	1	2	1	2	1	1	4	4	3	3	4	4	4	3	3	4
166	3		2	2	5	2	1	2	1	2	1	2	1	1	1	2	2	2	1	1	1	2	2	2	1	2	2	2	1	1	2	2	1	1	1	4	3	4	4	4	3	3	3	4	4
167	3		3	2	8	2	1	2	1	1	2	2	1	1	1	2	1	2	2	2	1	1	2	2	1	2	1	1	2	2	2	1	1	2	2	4	3	4	4	3	3	3	4	4	3
168	3		6	2	6	1	2	1	2	2	1	1	1	2	2	2	2	1	2	2	2	1	1	2	2	2	1	2	1	1	2	2	2	1	1	4	3	4	4	4	3	4	4	4	3
169	3		10	3	9	2	1	2	1	1	2	2	2	1	1	2	1	1	2	1	2	2	2	2	2	2	1	2	2	2	1	1	1	2	2	4	3	4	3	3	3	3	3	4	4
170	3		4	2	9	2	1	2	1	1	1	2	2	2	2	2	2	2	1	1	2	2	1	2	2	2	2	1	1	2	2	1	1	1	2	4	3	4	3	3	3	4	4	4	4
171	1		2	1	4	1	2	1	1	2	2	2	1	2	1	2	1	2	2	1	2	2	2	1	1	2	2	1	2	2	1	1	1	2	2	4	3	4	4	3	3	4	4	4	4
172	1		6	3	9	2	2	2	1	1	1	2	1	1	2	1	2	1	2	2	2	1	1	1	1	2	1	2	2	2	1	1	1	2	2	4	3	3	4	3	3	4	4	4	3

			A								B					C									D									E					
S/N	1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
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208	3		10	1	1	2	2	2	1	2	1	1	2	2	2	1	2	2	2	2	1	1	2	2	2	2	1	2	1	1	1	2	2	2	1	4	4	3	4	4	3	4	3	3	3
209	3		6	1	6	2	1	2	2	2	1	1	2	1	1	2	2	2	2	1	2	2	1	1	1	4	1	2	1	2	2	1	1	1	2	4	3	3	4	4	3	3	4	4	4
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211	3		6	2	5	2	2	1	2	2	1	1	2	2	2	1	2	2	2	2	1	1	2	2	1	2	1	1	2	2	1	1	1	2	2	4	4	4	3	3	4	3	4	3	3
212	3		10	2	5	2	1	1	2	2	1	1	2	2	2	2	1	1	1	2	2	2	1	1	2	2	1	2	1	1	2	2	1	1	2	4	3	3	4	4	4	3	4	4	4
213	3		2	1	6	2	1	2	2	1	1	2	2	2	1	2	2	2	1	1	2	2	2	1	2	2	1	2	1	1	1	1	2	2	2	4	3	4	3	3	3	4	4	3	3
214	3		10	2	4	2	1	2	2	2	1	2	1	1	1	2	2	1	1	1	2	2	2	1	2	2	1	2	2	1	1	2	2	1	2	4	3	4	4	4	4	4	3	3	4
215	3		6	3	9	2	1	2	2	2	1	1	2	2	1	2	1	2	2	1	1	2	2	2	1	2	1	2	1	2	2	2	1	1	1	4	3	4	4	4	4	4	3	3	4
216	3		6	1	6	2	2	1	2	2	1	1	1	2	2	2	2	2	2	1	1	1	2	2	1	2	2	1	1	2	2	2	2	1	1	4	3	4	4	3	4	4	3	3	4
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222	3		2	1	4	1	2	1	1	1	1	2	2	2	2	2	2	2	2	1	1	2	2	1	1	2	2	1	1	1	2	2	1	1	2	4	4	4	3	3	4	3	3	4	4
223	3		6	1	3	2	1	2	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	1	2	2	2	1	2	2	2	1	1	1	4	4	4	3	3	4	3	3	3	4
224	3		6	2	9	2	1	1	2	2	2	1	1	1	2	2	2	1	1	2	2	2	1	2	2	2	1	2	2	1	1	1	2	2	2	4	4	3	4	3	4	4	3	4	3
225	3		6	2	5	1	1	1	2	2	2	1	2	2	2	2	2	2	2	1	2	2	1	1	1	2	2	1	2	2	2	1	1	1	1	4	3	4	4	3	3	4	4	4	4
226	3		6	1	4	2	2	1	1	2	2	1	2	2	2	1	1	2	2	1	1	2	2	2	2	2	1	1	2	2	2	1	2	2	1	4	3	3	4	4	4	3	3	3	3
227	3		2	1	5	2	1	1	2	2	1	1	1	2	2	2	2	2	2	1	1	2	2	2	1	2	1	1	2	2	2	2	1	2	2	4	4	4	3	3	3	4	4	4	3
228	3		2	2	4	2	2	1	2	2	1	1	1	2	1	2	2	1	1	2	2	2	1	1	1	2	2	2	2	1	2	2	1	2	2	4	3	3	4	4	4	4	3	3	3
229	3		10	1	5	2	2	1	1	1	2	2	2	1	1	2	2	2	2	1	2	2	1	1	1	2	1	2	1	2	2	2	2	1	1	4	3	4	3	3	3	4	4	4	4
230	3		6	1	3	2	1	1	2	2	2	1	2	1	2	2	1	1	1	2	2	2	1	1	2	2	1	2	2	1	1	1	2	2	2	4	4	4	3	3	3	3	4	4	4
231	3		6	2	2	1	2	2	1	2	2	2	1	1	1	2	2	2	2	1	1	2	2	1	1	1	2	2	2	1	1	1	2	2	2	3	3	4	4	4	4	3	3	3	3
232	1		10	3	7	2	1	2	2	2	2	1	1	1	1	2	1	2	2	2	1	1	1	2	2	2	2	1	1	2	2	1	1	2	2	4	4	3	3	4	4	4	3	3	3

233	2	2	2	4	2	2	2	1	1	2	1	1	1	2	2	1	1	1	2	2	2	1	2	2	2	1	1	2	2	2	1	1	2	2	4	3	3	4	4	4	4	3	3	3
234	2	3	3	6	2	2	1	1	1	2	2	2	2	1	1	2	1	1	1	2	2	2	1	1	4	1	1	1	2	2	2	2	1	1	3	3	4	3	3	4	4	4	4	4
235	2	6	2	4	2	2	1	1	2	2	2	1	1	2	2	1	1	1	1	2	2	1	1	2	2	2	1	2	2	1	1	1	2	2	4	4	3	3	3	4	4	4	3	4
236	3	2	2	9	2	2	2	1	2	2	1	2	2	2	2	2	2	2	1	2	1	1	1	1	2	2	2	2	1	1	2	2	2	1	3	3	4	4	3	3	3	4	4	4
237	3	6	1	1	2	1	1	2	2	2	1	2	2	2	2	2	2	2	2	1	2	2	2	1	2	2	1	2	2	2	1	1	2	2	4	4	3	3	3	4	4	4	4	;.
238	3																																											

	SECTION A	SECTION A	SECTION B	SECTION C	SECTION D	SECTION A E

	1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
238	9		1	4	6	2	2	1	1	1	3	3	3	3	3	1	2	3	2	3	3	3	3	3	3	2	2	1	1	1	3	2	1	1	1	3	1	1	3	3	1	1	3	3	3
239	8		2	4	6	1	1	1	1	3	3	3	3	2	2	2	2	3	2	3	2	3	2	2	2	2	2	2	2	2	3	3	3	2	2	2	3	3	1	1	1	1	3	3	1	3
240	7		8	4	10	1	1	1	1	3	3	1	1	3	1	1	1	3	1	3	1	1	1	1	1	2	2	2	2	3	3	3	1	1	1	1	1	1	1	1	3	3	3	3	3	3
241	6		7	4	7	2	2	3	3	3	3	3	3	1	1	3	2	3	2	3	2	2	2	3	3	2	2	2	2	3	2	3	1	1	1	3	3	1	3	3	1	1	1	1	1
242	6		9	3	10	1	3	3	3	3	3	3	3	3	3	1	1	1	1	3	1	1	1	1	4	3	1	2	2	3	2	1	1	1	2	3	1	1	3	3	1	3	1	3	3
243	4		1	4	8	1	3	3	3	3	3	3	3	3	3	3	1	3	1	3	1	3	3	1	1	3	3	1	1	3	3	1	1	1	1	1	3	1	1	3	1	1	1	1	1
244	10		7	3	10	1	4	4	1	1	3	3	3	1	1	2	1	3	3	3	1	1	1	1	3	2	2	1	1	3	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3
245	2		2	3	4	1	1	1	3	3	3	2	2	1	1	3	2	3	2	3	2	3	2	2	2	2	2	1	2	3	2	2	1	1	1	3	3	3	3	3	3	3	3	3	4
246	2		1	3	6	1	1	1	3	3	3	3	1	1	1	1	1	3	1	3	1	3	1	1	1	2	2	1	1	3	1	3	1	1	1	3	3	3	3	3	3	3	3	3	3
247	10		2	3	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	1	3	1	1	1	3	3	1	3	3	3	3	3	3	3
248	3		2	3	3	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	3	3	1	1	3	2	2	2	2	3	2	2	1	1	1	3	3	3	3	3	3	1	3	3	3
249	3		4	2	2	1	1	1	1	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3
250	3		3	1	3	2	2	2	2	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	1	2	1	2	1	2	1	2	2	2	4	3	4	3	4	3	4	4	3	4
251	3		10	3	3	1	3	1	3	3	1	3	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3
252	3		6	3	5	1	1	2	2	1	1	2	2	1	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	4	3	4	3	4	3	4	3	4	3
253	2		6	3	9	1	1	1	2	2	2	2	2	2	2	1	2	1	2	1	2	1	2	1	2	2	1	2	1	2	1	2	1	2	1	4	3	4	3	4	3	4	3	4	3
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258	3		10	2	3	2	1	2	1	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	2	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3
259	3		4	4	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3
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261	3		10	1	1	2	1	1	2	2	2	2	2	1	1	2	2	2	2	1	2	1	2	1	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4	4	3	3	4	4	4
262	3		2	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3
263	3		2	2	5	2	1	2	1	2	1	2	1	2	1	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	1	2	1	2	1	4	3	4	4	3	3	3	3	3	3
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	SECTION A					SECTION B										SECTION C										SECTION D										SECTION E									
S/NO	1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
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