

**ASSESSMENT OF PROVISION AND UTILIZATION OF FACILITIES FOR  
TEACHING AND LEARNING OF MOTOR VEHICLE MECHANICS IN TECHNICAL  
COLLEGES IN NIGER STATE**

**BY**

**ADEWALE, Michael Seyi  
2016/1/63789TI**

**DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION  
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION  
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**

**APRIL, 2023**

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**A RESEARCH PROJECT SUBMITTED TO THE  
DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION  
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION  
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF  
TECHNOLOGY DEGREE (B. TECH) IN INDUSTRIAL AND TECHNOLOGY  
EDUCATION**

**APRIL, 2023**

## **DECLARATION**

I ADEWALE, Michael Seyi with matriculation number 2016/1/63789TI an undergraduate of the Department of Industrial and Technology Education certify that the work embodied in this project is original and has not been submitted in part or full for any Diploma or Degree of this or any other university.

**ADEWALE, Michael Seyi**

**2016/1/63789TI**

**Sign and Date**

## **CERTIFICATION**

This project has been read and approved as meeting the requirement for the award of B.Tech in (Automobile Technology) Education, Industrial and Technology Education, School of Science and Technology Education, Federal University of Technology Minna, Niger State.

Dr. Rufai Audu

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Project Supervisor

Signature & Date

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Head of Department

Signature & Date

\_\_\_\_\_  
External Examiner

Signature & Date

## **DEDICATION**

This research work is dedicated to Almighty God who in His mercy preserved my life to see the end of this programme against all odds and to my parents who saw me through the academic journey.

## **ACKNOWLEDGMENTS**

My sincere appreciation goes to Almighty God, the originator and giver of life for His Divine protection and guidance, His selfless-love towards me, His grace, wisdom and knowledge during the period of writing this project and beyond.

My appreciation goes to my project supervisor who is also the project coordinator; Dr. Rufai Audu for his selfless efforts, time, correction and positive suggestions that led to the successful completion of my project work.

Special thanks to the head of department, Industrial and Technology Education Dr. T. M. Saba, the exam officer Dr. Dauda and also to the entire staff of the department.

My appreciation goes to my lovely parents for their support, prayers and encouragement, their selfless love and effort during my program in school.

## **ABSTRACT**

The main aim of this study is to assess the provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state. Four research questions and one hypothesis were formulated and guided the study. Descriptive research survey was used for this study. The study was carried out in technical colleges in Niger State. The population for the study consists of 80 respondents comprising 10 principals and 70 MVM teachers. There was no sampling since the population was small and manageable. Structured questionnaire was used for data collection. The instrument that was used for the data collection was administered to the respondents by the researcher and three research assistant in the study area. Data collected was analyzed using mean and standard deviation for the research questions and t-test was used to test hypothesis at 0.05 level of significance. From the Findings, the study among others shows the Toolboxes (comprising a set of flat, ring, half-round, and triangular files), Ball peen hammer, Hacksaws with extra blades, 300mm engineer rule socket spanners sets, with extension (6-32) open and flat spanners. The findings of the study among others shows the Micrometer 0.25mm, 25-50mm, 50-75mm internal and external, Compressor (3phase motor-driven type complete with a spray gun, grease, hose). Finding also revealed that there was no significant difference in the responses of Principals and MVM teachers on the level of availability of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state. Based on the findings, the study concludes that school facilities remained one essential factor in the realization of the goals of education in Nigeria. This is because of its great role on teaching and learning process cut across the provision of essential services such as instructional facilities, infrastructural facilities, ICT materials and a conducive school physical environment. The study therefore recommends that policies implementation on facilities should be made stable in respect of any change of government and provision of adequate Data to enable proper and adequate implementation of available facilities among other.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Education is one of the most important aspects of human resource development. Education is a vehicle for economic, social and political development. An individual needs to develop and acquire necessary skills to enable him meet his own and national aspirations. Vocational and Technical Education leads to the acquisition of skill and techniques in chosen occupation or profession to enable an individual earn a living (Olaoye *et al.*, 2019). The Federal Government of Nigeria (FGN, 2014) viewed vocational and technical education as those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and acquisition of relevant skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Technical college is an aspect of vocational education that equip individual with relevant skills.

Technical college aims at equipping individual with relevance and adequate skills require to be self-reliance and be responsible members of the society. Technical colleges equip students in different area of study such as automobile technology (motor vehicle mechanics), Building technology, electrical electronics technology, metalwork technology and woodwork technology. Motor Vehicle Mechanic trade is one of the Technical Vocational Education programmes which involves the acquisition of scientific knowledge in design, selection of materials, construction, operation and maintenance of motor vehicles. According to National Board for Technical Education (NBTE, 2011) Motor vehicle mechanics trade students are expected to, upon completion of this training, be able to: test, diagnose, service and repair any fault on conventional motor vehicle assemble main units and systems to the manufacturers' specifications. Abdulkadir *et al.* (2020) explained that the objectives of the practical aspect of Motor Vehicle Mechanics at the technical college include the ability of motor vehicle craft

trainees to be able to: test, rebuild and replace injector nozzles, dismantle and reassemble carburettor following appropriate procedure, replace major emission control components, diagnose all problems relating to steering, braking and suspension systems, among others. In order to fully achieve the objective of MVM in technical colleges there must be adequate provision and utilization of teaching and learning facilities in the technical colleges.

The importance of provision of instructional facilities to teaching and learning of MVM cannot be over emphasized. According to Udo and Ubana (2018), learning can occur through one's interaction with one's environment. Environment here refers to the facilities that are available to facilitate students learning. Both students and teachers need facilities such as libraries, good drinking water, toilets, laboratories, workshops and security for teaching and learning. The current emphasis all over the world among educational practitioners is on learner-friendly instructional delivery system. Modern school environment put emphasis on the provision of facilities such as adequate and spacious classrooms, workshops/laboratories, computers, good source of water supply, toilets facilities, functional libraries and communication systems among others. All these facilities are required in appropriate quantity and quality (Eric & Ezeugo, 2019).

Oloke *et al.* (2017) pointed out that facilities constitute a strategic factor in organizational functioning, because they determine to a large extent the smooth functioning of any social organization or system including education. Oloke *et al.* (2017) further stated that their availability, adequacy and relevance influence efficiency and high productivity. Automobile Technology Education facilities serve as an aid for instructions. Through this, the teacher will be able to make his/her strategies in teaching more effective and meaningful. Facilities like workshops, laboratories, studios, equipment, machines, tools, consumable materials are used for teaching and learning of vocational technology education. Instructional facilities according to Adeniyi-Egbeola (2018) are any material things or services that facilitate teaching and

learning in schools. He further stated that instructional facilities for technology education programmes encompass the basic hand tools, equipment and machines in the workshops, laboratories and studios which aid effective teaching and learning. They are materials and services that help the teachers to facilitate teaching and learning in a school systems. It is a well-known fact that there is no way a teacher can teach practical aspect of a technical courses effectively when there is no functional tools, machines or equipment. Availability of tools, machines and equipment enhances students learning by allowing them to be involved in demonstration and practice that will continue to build their skills and prepare them for the world of work. Workshop tools and equipment are essential to Automobile Technology Education programmes. They provide opportunities for practical training of students in the acquisition of skills in different trade areas.

However, most of the technical institutions in Nigeria have been forced to perform below standard due low availability, inadequate, non-functional and poor management of the required tools and equipment in the workshops for effective training (Odoarefe & Osa, 2018). Similarly Jidda *et al.* (2018) observed that the provision of necessary facilities in educational institutions, especially technology education, in Nigeria is inadequate. In a study conducted by Ndirmbita and Bwala (2019) on the production of skill-oriented graduates for the labor market, the study revealed that the available physical and material resources used in teaching technical vocational education are grossly inadequate. Consequently, there is the need for available and functional tools and equipment in technical and vocational institutions for quality education and training towards the production of graduates who can perform competently in their chosen careers, since the major goal of vocational institutions is to prepare students for successful employment in the labour market (Omar *et al.*, 2020). This condition can only be met through well-equipped workshops with relevant, available and functional tools, equipment and materials. The study therefore seek to Assessment of the provision and the utilization of

facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state.

## **1.2 Statement of the Problem**

The provision of technical knowledge and appropriate skill is one of the objectives of technical education as contained in the Federal Republic of Nigeria (2014). Technical education has to do with a lot of facilities as observed by Bwala (2020) on inadequacy of facilities for teaching and learning in some schools. The researcher has noticed that students specializing in metalwork as a subject do not have adequate skills. This challenge can be traceable to inadequacy or absence of metalwork facilities for teaching metalwork as a subject in the colleges of education. Efforts made by successive governments in the past to promote technical education such that teachers could impart the necessary skills to learners without much difficulties have been crippled by lack of necessary courage on the part of the leadership to back up words with action. Brockmann and Laurie (2016) pointed out that the facilities for teaching vocational technical education which MVM trade is a part are of short supply and obsolete. Ogbunaya and Udoudo (2015) affirmed that one of the great issues of controversy among technical vocational education and training educators is the issue of poor state of workshop tools and equipment in technology education institutions. The study therefore seek to Assessment of the provision and the utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state.

## **1.3 Purpose of the Study**

The main purpose of this study is to assess the provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state. Specifically the study will identify:

- 1 The level of availability of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state.
- 2 The level of utilization of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state.
- 3 Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state
- 4 Various ways of managing Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state.

#### **1.4 Significance of the Study**

The findings of this study will be of benefit to the MVM students, MVM teachers, Governments as well as the parent and the society.

MVM requires the use of learners-centered methods and lots of facilities to help students understand the content better. This helps them retain information learnt and be able to recall during tests and examinations. This study will facilitate the knowledge of learners on the effectiveness of facilities on the teaching and learning of MVM which will serve as feedback to the education sector.

The study will influence policy formulation pertaining to the training of MVM teachers in future. Teachers will also be aided on the efficient use of Facilities to reach across diverse learners in the teaching-learning process.

This study will also help Government in the implementing of certain project in educational system as strategies in selecting bids, letting contracts for construction and furnishing of buildings or purchase and installation of facilities as well as monitoring and supervision of project execution to ensure they meet the specifications will be discussed on.

Parent and society will benefit from the findings of this study as it will enable them to know better ways of giving their children quality education and what is required for their children and wards to learn effectively. The findings of this study will help the parent and the society to know the usefulness of teaching and learning facilities in the educational processes.

### **1.5 Scope of the Study**

This study will be carried out to assess the provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state. This study will cover the level of availability of facilities, level of utilization of available facilities, factor hindering the provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state as well as the way forward on the factors hindering the provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state. The management of workshop equipment will not be covered.

### **1.6 Research Questions**

1. To what extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state available?
2. To what extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state utilized?
3. What are the Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state?
4. What are the various ways of managing Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state?



## **1.7 Hypothesis**

The following null hypothesis was tested at 0.05 level of significance.

**H<sub>01</sub>:** There is no significant difference in the mean response of Principals and MVM teachers on the level of availability of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state.

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

The review of related literature of this study is organized under the following subheadings:

#### 2.1 Conceptual Framework

##### 2.1.1 Motor Vehicle Mechanics Work Programme

##### 2.1.2 Concept of School Facilities

##### 2.1.3 Concept of Assessment

##### 2.1.4 Concept of Provision

##### 2.1.5 Concept of Utilization

##### 2.1.6 Factors Hindering the Implementation of Available School Facilities in Nigeria

##### 2.1.7 Ways of Managing the Factors Hindering the Implementation of Available School Facilities

#### 2.2 Theoretical framework

##### 2.2.1 Gagne's theory of learning

#### 2.3 Related Empirical Studies

#### 2.4 Summary of Literature Reviewed

### **2.1 Conceptual Framework**

#### **2.1.1 Motor Vehicle Mechanics Work Programme**

Motor Vehicle Mechanic's Work (MVMW) is a vocational trade that prepares individuals for the world of work. It is one of the automobile trades offered in technical colleges in Nigeria (NBTE, 2011). MVMW in technical colleges is aimed at producing competent vehicle mechanics with sound theoretical knowledge and should be able to diagnose and carryout repairs and/or maintenance on all types of Diesel and Petrol Vehicles (National Board for

Technical Education, 2011). In other words, the programme for MVMW in Nigerian technical colleges is designed to produce competent maintenance craftsmen for all types of motor vehicle. These craftsmen may also wish to take the opportunity for further technical education (NBTE, 2011).

A national curriculum according to Olaitan and Udeh (2020), was adopted in all technical colleges and accredited by the National Board for Technical Education (NBTE). The programme is offered at two levels leading to the award of National Technical Certificate (NTC) for craftsmen and Advanced National Technical Certificate (ANTC) for Master craftsmen. According to Federal Government of Nigeria (2014), technical college graduates on completion of the Motor Vehicle Mechanic's Work in the technical college shall:

- Secure employment either at the end of the whole course or after completing one or more modules of employable skills;
- Set up their own business and become self-employed and be able to employ others;
- Pursue further education in advanced craft/technical institutions such as polytechnics, or colleges of Education (Technical) and Universities.

In pursuance of the aims and goals of technical colleges, Federal Government of Nigeria (2014) pointed out in the National Policy on Education that the main feature of the curricular activities for technical colleges shall be structured in foundation and trade modules. In line with the policy statement, the revised National Technical Certificate (NTC) and revised Advanced National Technical Certificate (ANTC) programmes, curriculum and course specifications were published in 2001 for Motor Vehicle Mechanic's Work and other vocational courses in the Technical Colleges by National Board for Technical Education (NBTE). It was sponsored by United Nations Educational Scientific and Cultural Organization-Nigeria project in support of the Revitalization of Technical and Vocational Education in Nigeria.

### **2.1.2 Concept of School Facilities**

The concept of school facilities refer to school buildings (classrooms, assembly halls, laboratories and workshops, libraries e.t.c) teaching aids and devices such as modern educational hardwares and their softwares in the form of magnetic tapes, films and transparencies (Kingsley, 2019). They are therefore, materials things that facilitate teaching and learning processes in the school. In his own contributions, Ghavifekr and Rosdy (2015) is of the opinion that, school facilities are those things which enable a skillful teacher to achieve a level of instructional effectiveness that far exceeds what is possible when they are not provided. These facilities are therefore related directly to school curriculum. A well designed functional school building with a wide array of teaching aids thereby provide effective delivery of the schools' curriculum and are positively related to academic performance (Richmond *et al.*, 2018).

According to the Richmond *et al.* (2018), school facilities are the treasurable assets of the school through which effective teaching and learning can take place and be promoted. Emphasizing on the importance of curriculum drawn to the School Facilities type, it helps to determine to a large extent, the nature of school facilities needed.

School Facilities according to Yen and Halili (2015) should be properly planned, developed and maintained in order to ensure its relevance to the school curriculum and its effective teaching and learning in any educational institutions. Educational facilities are indispensable as far as the industry is concerned. They are essential for the well-being and comfort of teachers' and the students' in the teaching learning process.

According to Okoko and Ibara (2020) "there are no two opinions on the idea that a school building must be spaciouly planned, functional and with pleasing architectural features". He further stated that buildings are to education, as the body is to the mind. This is to say that a

fine building makes a fine school and poor buildings, a poor school. From the above assertion, we can agree that a school should be housed in beautiful buildings which are not only stimulating centres of education for children but also vital centres of community life. This can only be achieved through excellent planning of school facilities. School facilities embrace both temporary and permanent structures of school sites. School facilities consist of basic systems and structures which a viable school needs in order to function effectively and to fulfill the purpose for which it was established.

At times, students and teachers find themselves in a physical environment that adversely affects their morale and in some cases, their health. For example, if the science laboratory is dilapidated, it will create fear for both students' and teachers' to conduct practical inside. Also, if the toilet is bad, the odour will convey sickness to both students and teachers. When a school building is in disrepair, students' achievement suffers, e.g. a swinging door classroom with broken glass windows is a source of danger to students when they run up and down in the class. People are affected and influenced by their environment. Children exposed to environment condition in the school facilities are no exception.

### **Components of School Facilities**

There are three major components. These are:

- Infrastructural facilities
- Instructional facilities
- School physical environment.

**Infrastructural facilities** include buildings such as administrative block, (which comprises the principals' office, vice principal and staff rooms, classroom) laboratory, stores, sick-bay, records office, school shop, library, music room, cafeteria, Intro technology laboratory,

security post, staff quarters' and school farm as well as storage house, electricity, water supply, sport field (Ogochukwu & Gbendu, 2015).

**Instructional facilities** are teaching materials and equipment, that comprises laboratory equipments, introductory technological equipment, wall clock, puzzles, television, radio V.CD plates and players, piano, flute, chalkboard, cardboards, duster, apparatus for science practical, models, picture charts, e.t.c.

Government policy on school facilities vary. While in some schools, parents buy the textbooks needed for studies, and in some schools, government buys or provides the textbooks and give them free to students. Library books are bought from public funds (taxes). Whatever the government policies maybe, it is the responsibility of the school head (principal or headmaster as the case may be) to put the furniture, equipment, buildings and playing grounds in good condition.

**School Physical Environment** include building and play ground, sport field, fire extinguisher, school bus, car park and sand bath. Also, school facilities include mechanical material like technological machines, generator, photocopier machines, computer machines, plumbing materials like water taps, bore hole - electrical telecommunication like speakers, radios, network system, security and fire suppression systems.

### **2.1.3 Concept of Assessment**

Assessment is the process of documenting, usually in measurable terms, knowledge, skills, attitudes and beliefs. Assessment is an action which determines the importance, size or value to something. According to Reeves *et al.* (2015) assessment is the systematic collection of information about student learning, using the time, knowledge, expertise and resources available, in order to make informed decision about how to improve learning. Furthermore, assessment is a process of seeking the best available indicator to see if, goals are being met.

This includes field specific and professional judgments about learning outcomes which are used to make informed departmental and institutional decision. According to him, assessment means basing decisions about curriculum, pedagogy staffing, advising and students support upon the best possible data about learning and the factors that affect it.

Similarly, Evans and Popova (2016) defined assessment as a systematic collection, review and use of information about educational programmes undertaken for the purpose of improving student learning and development. In line with the above assumptions, Shepherd and Godwin (2004) stated that assessment is the term generically used to describe quizzes, test, surveys and examinations. Furthermore, assessment is any systematic method of obtaining evidence from posing questions to draw inferences about the knowledge, attitudes and other characteristics.

According to Aguinis *et al.* (2017) assessment is associated with institutional effectiveness and related to questions about positive change and improvement institution. In accordance with the above assertion Duckworth and Yeager (2015) stated that "when we assess our performance, it is assessment, when others assess our performance, it is accountability. That is to say assessment is a set of initiative we take to monitor the results of our actions and improve ourselves, accountability is a set of initiatives other take to monitor" the results of our actions and to penalize or reward us based on the outcomes. Furthermore, assessment is not an end in itself but a vehicle for improvement education. Assessment is at the continuing improvement of student development and is generally consistent with a value added concept of education and rationale for having better programmes to ensure better students' learning outcomes.

Assessment is a systematic process of determining merit in which processed educational objectives are obtained by pupils (Torrance, 2017). Barth and De Jong (2017) opined that assessment will be used as a term for the process of investigating the status of an individuals

or group. Assessment may be defined as any method used to better understand the current knowledge that a student possesses.

#### **2.1.4 Concept of Provision**

Oxford Dictionary defines provision as an item of goods or Supplies obtained for future use. It could also be refers to as money set aside for future events. From a legal point of view, provision is a cause in legal instrument, a law, etc. providing for a particular matter or stipulation. It can also be describe as a term, condition, agreement, requirement, demand, restriction, rider, reservation or a caveat in the legal point of view.

Hearn (2015) opines that provision is a service, fund, resources or allowance, which is pre-arranged as contingency to cater for any need that may arise.

Similarly, United Nation Educational Science and Cultural Organization (UNESCO)(2006), sees provision from the aspect of education as, the right of every child to education on the basis of equity of opportunity and without discrimination on any ground. To achieve this education provision must be available and accessible to all children, while the right of quality education enables the child to fulfill his potentials, realize opportunities for employment and develop life skills.

#### **2.1.5 Concept of Utilization**

Frasquet *et al.* (2015) stated that utilization is the degree or extent to which an item has been put into effective use. According to him, various degree of utilization includes non-utilization, underutilization, maximum utilization, optimal utilization and over utilization. In this regard, utilization of boarding facilities has to do with judicious harnessing of available boarding facilities for the achievement of educational objectives.

Most schools are often underutilized. The rate of utilization could be increased either by extending the utilization time or by allowing access to the school equipment and sport



equipment by the community. Loukaitou-Sideris (2021) observed that, most schools are often underutilized. They opined that, time utilization rate (TUR) and space utilization rate (SUR) are indicators used to measure the utilization of facilities for teaching. They defined time utilization rate as ratio between the numbers of periods during which classroom is used, and the maximum number of period available per week. While space utilization rate, compared the average size of the classes occupying a room and its theoretical capacity.

However, optimal utilization of facilities connotes the practice of using a school facility for as many purposes as possible. If boarding is to be adequately and appropriately utilized, flexibility in the design of the facilities is needed. Choi, A. D., Abbara *et al.* (2020) have emphasized that, in order to make optimal utilization of facilities in school, school personnel and members of the community should have adequate knowledge some items will be under-used, some will be over used while others will not be used at all.

#### **2.1.6 Factors Hindering the Implementation of Available School Facilities in Nigeria**

In the review of facilities it was found out that the quality of education is dependent on a variety of factors, some of which are the availability of classrooms furniture, equipments, textbooks, libraries, laboratories and technical workshops which are very essential in teaching and learning process. Therefore, students in both developed and developing countries have shown that such factors contribute greatly to students' achievement. Shahsavari and Akbari (2018) research in developed and developing countries has led him to the conclusion that students in developing countries perform much below those of developed countries because of inadequate and poor facilities. He points out comparatively the achievement of Malawi standard eight students in mathematics and science is below that of Thailand, Iran, Chile and developed countries such as Sweden, U.S.A and United Kingdom. Thus, at the minimum a school is acceptable if it can provide a place for students to work without the danger of a roof collapsing if neither wind nor rain sends students in to a corner for protection. If there is a place for each

to sit down, a place write , material to write with, and a certain minimal number of maps, charts, and reference books from which to derive information (Mayer, 2019).

Instructional spaces as classrooms, libraries, laboratories and technical workshops are very vital in teaching and learning process. The extent to which these spaces could enhance effective teaching and learning depends on their location within the school premises, their structure and instructional facilities. It is not unlikely that well planned instructional spaces in terms of location, structure and facilities will facilitate effective teaching and learning process and as well as enhance good academic performance of the pupils.

Consequently, on emphasizing the importance of instructional spaces to students' academic performance, Ramli *et al.* (2018) maintained that one cannot expect high level of students' academic performance where school buildings such as classrooms, libraries, textbooks, technical workshops, and laboratories are substandard. It is emphasized that clean, quiet, safe, and comfortable and health environment are important component of successful teaching and learning. Similarly, Godstime and Joseph (2019) maintained that high level of student'/pupils' academic performance may not be granted where instructional facilities such as textbooks, classrooms, libraries, technical workshops, where necessary and laboratories are structurally defective, not properly ventilated and not spacious enough for use. It was further emphasized that structural effectiveness, proper ventilation space and well located instructional space may lead in the successful teaching and learning process in the school.

In the review of educational literature, it is frequently argued that the quality of education is dependent on a variety of factors some of which are the availability of classrooms, furniture, equipment, textbooks, libraries, laboratories and technical workshops are crucial in teaching – learning process. Hanna and Olken (2018) Research in developed and developing countries has led him to the conclusion that students in developing countries perform much below than those

of developed countries, because of inadequate and poor school facilities- He points out comparatively the achievement of Malawi standard eight students in mathematics and science is below that of Thailand, Iran, Chile, and developed countries such as Sweden, U.S.A. and U.K. Thus, in the context of this important aspect (school instructional facilities) there must be adequate and required number of school facilities so as to have better and qualitative education in all parts of the country.

Schulze *et al.* (2020) maintained that at the minimum a school is acceptable if it can provide a place for students to work without the danger of a roof collapsing; if neither wind nor rain sends students in to the corner for protection, if there is a place for each to sit down, a place to write, material to write with and a certain minimal number of maps, charts, and reference books from which to derive information.

### **2.1.7 Ways of Managing the Factors Hindering the Implementation of Available School Facilities**

One, there needs to come into existence a focused, responsible and purposeful political leaderships at the heads of the various government tiers (Federal Government, State Government and Local Governments), and the emergence of honest and dedicated leaderships at the heads of educational ministries and parastatals. It is expected that the democratization process in Nigeria will aid and hasten the coming into existence of such visionary and purposeful leaderships that will be more inclined to developing appropriate policies to address School facilities problems and such policies that can be effectively implemented by the Nigerian Education System.

Two, Government need to embark on a programme for improving working conditions of the education as this will help to build student, teachers and education authority morale, dedication and commitment to implementing policies. Specifically, an improvement in pay packages will,

for instance, significantly diminish the corruption tendencies among the education administrators in Nigeria and hence allow for the proper use of allocated fund for implementing policies.

Three, there is also the need for a conscious effort by government leadership to reduce the extent to which politics infiltrates activities in Nigeria educational system. This will ensure that educationist in authority are allowed to exercise real control and authority and to be able to function freely and apply some basic ideals of weberian model of bureaucracy in their administrative processes and procedures. Such will, indeed, allow for more effective functioning of the Nigeria Educational System.

Four, the culture of discontinuity of policies in cases of changes in government or organizational leadership should be discouraged. Specifically, we recommend that the National and the State Assemblies should enact a law that will gurarantee continuity of policies made forwards growth and development. This is necessary because, even though government comes and goes, the educational system remains and should continue the implementation of existing policies unless fundamental developments render their continued implementation impossible or unnecessary.

Indeed, if every leader that comes into position puts aside the ones in place before their tenure, Nigeria education system will never grow.

## **2.2 Theoretical framework**

### **2.2.1 Gagne's theory of learning**

Gagne's theory of learning was propounded by R.M. Gagne in 1965. This theory stipulates that there are several different types or levels of learning. The significance of these classifications is that each different type requires different types of instruction. Gagne identifies five major categories of learning: verbal information, intellectual skills, cognitive

strategies, motor skills and attitudes. Different internal and external conditions are necessary for each type of learning. For example, for cognitive strategies to be learned, there must be a chance to practice developing new solutions to problems; to learn attitudes, the learner must be exposed to a creditable role model of persuasive arguments.

Gagne suggests that learning tasks for intellectual skills can be organized in a hierarchy according to complexity: stimulus recognition, response, generation concept formation, rule application and problem solving. The primary significance of the hierarchy is to identify prerequisites that should be completed to facilitate learning at each level. Prerequisites are identified by doing task analysis of learning/training task. Learning hierarchies provides a basis for the sequencing of instruction. In addition, the theory out-lines nine instruction events and corresponding cognitive process:

- Gaining attention (reception)
- Informing learners of the objective (expectancy)
- Stimulating recall of prior learning (retrieval)
- Presenting stimulus (selective perception)
- Providing learning guidance (semantic encoding)
- Eliciting performance (responding)
- Providing feedback (reinforcement)
- Assessing performance (retrieval)
- Enhancing retention and transfer (generalization)

These events should satisfy or providing the necessary conditions of learning and serve as the basis for designing instruction and selecting appropriate media. Also, Gagne equally proposed four stages of learning sequence and they are: apprehension, acquisition, storage and retrieval.

This depicts the fact that information does not just arrive the long term memory rather it is first received and acquired before storage which precedes retrieval. This theory is related to this work since it is built on the fact that different types of learning require different type of instruction, which is the mainstay of reflective teaching strategy. Reflective teaching employs different kinds of internal and external conditions to make learners learn.

### **2.3 Related Empirical Studies**

James (2015) investigated a study on the availability and utilization of instructional facilities and material for the effective teaching of Basic Electricity in Ebonyi State technical colleges. Two research questions and one hypothesis guided the study. It was a survey research design and the entire population of Basic Electricity technical teachers together with their SSII and SSIII students with a total of 150 were used. Due to this size of the population no sampling was carried out. Instrument for data collection was a structured and validated questionnaire with a reliability coefficient of stability 0.86. The questionnaire were distributed by hand and also collected back after completion with the help of three research assistants. Frequency counts and percentages were used to answer research question one while mean ratings were used to answer the second research question. The hypothesis was tested with t-test statistics. The findings revealed that many vital facilities and materials are not available while some available ones are not even effectively utilized for the teaching of Basic electricity. It was therefore recommended that all stake-holders should contribute financially and materially to enhance the effective teaching of basic electricity.

Thlana (2019) carried out a study to evaluate the facilities in Colleges of Education for teaching and learning of Automobile Technology in North-East Zone of Nigeria. The study involved 236 subjects in five (5) colleges of education having department of automobile technology as a course of study. Two (2) research questions and two (2) hypotheses were

formulated which guided the study. The study employed survey research design. An observational checklist using NCCE minimum standard requirements and a structured questionnaire were used for data collection. The instrument was validated by four (4) experts and their comments, advice and suggestions were used in the development of the final instrument. Percentages, mean and standard deviation were used for data analysis. One Way Analysis of Variance (ANOVA), the Chi-Square statistics were used to test the hypotheses at 0.05 level of significance. The findings of the study showed among others that: the available instructional facilities for teaching and learning of Automobile Technology in Colleges of Education in North-East Zone of Nigeria were low. Hence, it was recommended that government should adequately equip Colleges of Education that offer Automobile Technology with modern tools, equipment and machines for the training of Automobile Technologists as recommended by NCCE (2012) if they are to remain relevant in the automobile industries.

Ogbuanya (2020) conducted a study on assessment of instructional facilities in implementing the contents of the motor vehicle Mechanics' work curriculum in technical colleges in north central Nigeria. The training of motor vehicle mechanics is not only expertise demanding, but also requires a lot of facilities which has to be effectively utilized for the realization of instructional objectives. The objectives of the study were (1) to ascertain the availability of instructional facilities; and (2) to find out the extent of the usage of the instructional facilities in implementing the contents of the MVMWC. The population of the study was 465; consisting of 418 male and 38 female MVMW National Technical Certificate (NTC) III graduating students for the 2017/2018 session, in the 22 accredited technical colleges in the North-Central States of Nigeria, and 9 MVMW graduates of technical colleges in the area of study who were operating functional workshops. The study adopted a Multi-stage Sampling Technique to select a sample size of 189 which comprised 165 male and 15 female MVMW NTC III graduating

students and 9 MVMW graduates of technical colleges from the area of the study. A questionnaire and Focus Group Discussion (FGD) were used as instruments for data collection. The research questions were analyzed using mean, frequency count, and percentages. The findings of this study revealed: lack of basic instructional facilities for effective implementation of the MVMWC in technical colleges in the North Central States of Nigeria; and a low extent of utilization of the very few instructional facilities available.

Bwala (2020) conducted a study to assess the facilities in Colleges of Education for teaching and learning of Metalwork Technology in North Eastern States of Nigeria. The study involved 64 subjects in six (6) colleges of education having department of metal technology as a course of study. Two (2) research questions and two (2) hypotheses were formulated which guided the study. The study employed survey research design. A structured questionnaire was used for data collection. The instrument was validated by four (4) experts and their comments, advice and suggestions were used in the development of the final instrument. Mean and standard deviation was used for data analysis. Z-test was used to test the hypotheses at 0.05 level of significance. The findings of the study showed among others that: the available instructional facilities for teaching and learning of Metalwork Technology in Colleges of Education in North Eastern States of Nigeria were low. Hence, it was recommended that government should adequately equip Colleges of Education that offer Metalwork Technology with modern tools, equipment and machines for the training of Metalwork Technologists as recommended by NCCE (2012) if they are to remain relevant in the automobile industries.

#### **2.4 Summary of Literature Reviewed**

Motor Vehicle Mechanics Work Programme, Concept of School Facilities, Concept of Assessment, Concept of Provision, Concept of Utilization, Factors Hindering the Implementation of Available School Facilities in Nigeria, Ways of Managing the Factors Hindering the Implementation of Available School Facilities. The chapter concludes with an



overview of factors hindering the Implementation of Available School facilities in Nigeria. The deductions arrived at are hoped to be paramount importance in an attempt to put forward suggestions to the appropriate educational authorities that might help bring a reconciliation between policies and practice. The idea is thus directed towards moving education forward in a more meaningful and purposeful.

## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.1 Design of the Study**

The study adopted the descriptive survey research design used to assess the provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state. Survey design is aimed at collecting data on and describing in a systematic manner, the characteristics features or facts about a given population. The design is suitable for the study because it solicits information from principals and MVM teachers.

#### **3.2 Area of the study**

The study was carried out in all technical colleges in Niger State.

#### **3.3 Population for the Study**

The population for the study consists of 80 respondents comprising 10 principals and 70 MVM teachers.

#### **3.4 Sample and Sampling Technique**

There was no sampling since the population was small and manageable.

#### **3.5 Instrument for Data Collection**

The researcher designed a structured questionnaire as an instrument that will be used in collecting data for the study. The questionnaire was made up of four sections (A, B, C, D and E). Section 'A' contains items on personal information of the respondents. Section 'B' seeks level of availability of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state. Section 'C' finds level of utilization of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state. Section 'D' finds out

Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state. While Section 'E' find out the ways of managing Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state. The questionnaire items were based on four points scale types. Items for section 'B', 'C', 'D' and 'E' contain four responses category each. The response categories for section 'B', 'C', 'D' and 'E' are strongly Agree (SA), Agree (A), and Disagree (D) and strongly disagree (SD). These response categories will be assign numerical values of 4, 3, 2 and 1 respectively. Respondents were require checking (✓) against the response category that best satisfies their opinion.

### **3.6 Validation of instrument**

The instrument was validated by three lecturers in the department of Industrial and Technology Education, Federal University of Technology, Minna and contributions on the appropriateness of the instrument was considered in the production of the final copy of the research instrument.

### **3.7 Reliability of instrument**

In order to determine the reliability of the research instrument, a pilot test was conducted using fifteen in other locations. During the test, the questionnaires were distributed by the researcher. The questionnaire was filled by the respondents and then returned to the researcher. The data collected will be analyzed using Crombach Alpha.

### **3.8 Administration of instrument**

The instrument that was used for the data collection was administered to the respondents by the researcher and three research assistant in the study area.

### 3.9 Method of Data Analysis

Data collected was analyzed using mean and standard deviation for the research questions and t-test was used to test hypothesis at 0.05 level of significance. A four (4) point rating scale will be to analyze the data as shown below.

Strongly Agree	(SA)	=	4points (3.5 – 4.0)
Agree	(A)	=	3points (2.5 - 3.49)
Disagree	(D)	=	2points (1.5 – 2.49)
Strongly Disagree	(SD)	=	1point (1.0 – 1.49)

Therefore, the mean value of the 4 point scale is:

$$\bar{X} = \frac{4+3+2+1}{4} = \frac{10}{4} = 2.5$$

### 3.10 Decision Rule

The cut-off point of the mean score of 2.50 was chosen as the agreed or disagreed point. This was interpreted relatively according to the rating point scale adopted for this study. Therefore, an item with response below 2.49 and below was regarded or considered as disagreed while an item with response at 2.5 and above was regarded or considered as agreed.

## CHAPTER FOUR

### PRESENTATION AND ANALYSIS OF DATA

#### 4.1 Research Question 1

To what extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state available?

**Table 4.1: Mean responses of the Principals and MVM teachers on the extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state available.**

		N <sub>1</sub> = 10	N <sub>2</sub> =70	
S/N	ITEMS	$\bar{X}$	SD	Remark
1	Toolboxes (comprising a set of flat, ring, half-round, and triangular files)	3.40	.910	Available
2	Ball pein hammer	3.60	.495	Available
3	Hacksaws with extra blades	3.67	.617	Available
4	300mm engineer rule socket spanners sets, with extension	3.70	.463	Available
5	(6-32) open and flat spanners	3.67	.617	Available
6	Ring spanners (6-32mm)	3.64	.485	Available
7	Energy stone/block cloth	3.60	.632	Available
8	Plug spanners	3.62	.490	Available
9	Magnet spanners	3.60	.632	Available
10	Allen keys	3.64	.485	Available
11	Feeler gauges	3.67	.617	Available
12	Oil cans	3.64	.485	Available
13	Vernier caliper with clock	3.67	.617	Available
14	Hand gloves/apron	3.60	.495	Available
15	Surface plates	3.67	.617	Available
16	Vee blocks	3.64	.485	Available
17	Micrometer 0.25mm, 25-50mm, 50-75mm internal and external	3.60	.507	Available
18	Compressor (3phase motor-driven type complete with a spray gun, grease, hose)	3.56	.501	Available

19	Wheel balance (rim 13-15)	3.60	.507	Available
20	Portable tire inflator	3.60	.495	Available
21	Weld master vulcanizer	3.53	.516	Available
22	Airline gauge	3.58	.642	Available
23	Steam cleaner (complete) oil-fired or electric	3.67	.488	Available
24	High-pressure washer	3.58	.575	Available
25	Tire changer complete with bead breaker	3.73	.458	Available
26	Various sizes of wheel braces	3.66	.519	Available
27	Blow lamps	3.67	.488	Available
28	Pipe wrench, clamp or vice	3.66	.519	Available
29	Wheel alignment gauge	3.73	.458	Available
30	Flat spanners (long and short)	3.70	.463	Available
31	Clutch alignment gauge	3.73	.458	Available
32	Adjustable wrench	3.60	.495	Available
33	Injector repair machine	3.73	.458	Available
34	Injector needle service kit	3.72	.454	Available
35	Pullers, different sizes	3.73	.458	Available
36	Spark plug tester	3.72	.454	Available
37	Workbench with vices	3.73	.458	Available
38	Portable engine hoist	3.70	.463	Available
39	Electrical test bench	3.73	.458	Available
40	Honing machine with accessories and assorted cutters	3.78	.418	Available

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**N=80**

$\bar{X}$ = mean of the respondents

**N<sub>1</sub>** = Principals

**N<sub>2</sub>**= MVM teachers

**SD** = standard deviation of the respondents

Table 4.1 showed that both the Principals and MVM teachers agreed on all items from 1 to 40. This is because none of the mean response was below 2.50 which was the beach mark of agreed on the 4-points response options. This showed that the responses of the Principals and MVM teachers on the items were not divergent.

## 4.2 Research Question 2

To what extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state utilized?

**Table 4.2: mean response of the Principals and MVM teachers towards the extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state utilized**

S/N	ITEMS	N <sub>1</sub> = 10		N <sub>2</sub> =70
		$\bar{X}$	SD	Remark
1	Toolboxes (comprising a set of flat, ring, half-round, and triangular files)	3.62	.490	High Extent
2	Ball pein hammer	3.67	.617	High Extent
3	Hacksaws with extra blades	3.54	.503	High Extent
4	300mm engineer rule socket spanners sets, with extension	3.67	.617	High Extent
5	(6-32) open and flat spanners	3.58	.499	High Extent
6	Ring spanners (6-32mm)	3.67	.617	High Extent
7	Energy stone/block cloth	3.56	.644	High Extent
8	Plug spanners	3.67	.617	High Extent
9	Magnet spanners	3.60	.535	High Extent
10	Allen keys	3.67	.617	High Extent
11	Feeler gauges	3.60	.535	High Extent
12	Oil cans	3.67	.617	High Extent
13	Vernier caliper with clock	3.62	.530	High Extent
14	Hand gloves/apron	3.67	.617	High Extent
15	Surface plates	3.66	.479	High Extent
16	Vee blocks	3.67	.617	High Extent
17	Micrometer 0.25mm, 25-50mm, 50-75mm internal and external	3.64	.485	High Extent
18	Compressor (3phase motor-driven type complete with a spray gun, grease, hose)	3.67	.617	High Extent
19	Wheel balance (rim 13-15)	3.70	.463	High Extent

20	Portable tire inflator	3.67	.617	High Extent
21	Weld master vulcanizer	3.68	.471	High Extent
22	Airline gauge	3.67	.617	High Extent
23	Steam cleaner (complete) oil-fired or electric	3.66	.479	High Extent
24	High-pressure washer	3.67	.617	High Extent
25	Tire changer complete with bead breaker	3.66	.479	High Extent
26	Various sizes of wheel braces	3.67	.617	High Extent
27	Blow lamps	3.62	.490	High Extent
28	Pipe wrench, clamp or vice	3.67	.617	High Extent
29	Wheel alignment gauge	3.54	.503	High Extent
30	Flat spanners (long and short)	3.67	.617	High Extent
31	Clutch alignment gauge	3.56	.501	High Extent
32	Adjustable wrench	3.73	.594	High Extent
33	Injector repair machine	3.52	.646	High Extent
34	Injector needle service kit	3.53	.743	High Extent
35	Pullers, different sizes	3.60	.535	High Extent
36	Spark plug tester	3.73	.594	High Extent
37	Workbench with vices	3.56	.541	High Extent
38	Portable engine hoist	3.67	.617	High Extent
39	Electrical test bench	3.60	.535	High Extent
40	Honing machine with accessories and assorted cutters	3.67	.617	High Extent

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**N=80**

$\bar{X}$ = mean of the respondents

**N<sub>1</sub>** = Principals

**N<sub>2</sub>**= MVM teachers

**SD** = standard deviation of the respondents



Table 4.2 showed that both the Principals and MVM teachers agreed on all items. This was because none of the mean response was below 2.50 which was the bench mark of agreed on the 4-point response options. This showed that the responses of the Principals and MVM teachers on the items were not divergent.

### 4.3 Research Question 3

What are the Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state?

**Table 4.3: mean responses of the Principals and MVM teachers on the Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state.**

S/N	ITEMS	N <sub>1</sub> = 10		N <sub>2</sub> =70
		$\bar{X}$	SD	Remark
1	Lack of qualified teacher to instigate the availability and utilization of Facilities for teaching and learning of MVM.	3.70	.470	Agreed
2	Embellzement of funds provided to make Facilities for teaching and learning of MVM available in the school	3.55	.673	Agreed
3	Unconcerned attitude of politicians or Government to make provision for school facilities as promised before assuming office.	3.55	.759	Agreed
4	Number of Students is More than the available Facilities for teaching and learning of MVM.	3.66	.635	Agreed
5	Poor attitude of MVMW teachers to wards improvisation of training equipment.	3.45	.826	Agreed
6	Poor remuneration & lack of motivation discourage MVMW teachers from workshop practice	3.43	.792	Agreed
7	Students' laziness & lack of focus on skill acquisition in MVM trade	3.65	.587	Agreed

**N=80**

$\bar{X}$ = mean of the respondents

N<sub>1</sub> = Principals

N<sub>2</sub>= MVM teachers

SD = standard deviation of the respondents

Table 4.3 showed that both the Principals and MVM teachers agreed on all items from 1 to 15. This was because none of the mean response was below 2.50 which was the bench mark of agreed on the 4-point response options. The standard deviation score ranged between 0.470 and 0.826. This showed that the responses of the Principals and MVM teachers on the items were not divergent.

#### 4.4 Research Question 4

What are the various ways of managing Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state?

**Table 4.4: mean responses of the Principals and MVM teachers on the various ways of managing Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state**

S/N	ITEMS	N <sub>1</sub> = 10		N <sub>2</sub> =70
		$\bar{X}$	SD	Remark
1	Provision of adequate Data to enable proper and adequate implementation of available facilities	3.71	.599	Agreed
2	Policies implementation on facilities should be made stable in respect of any change of government.	3.65	.489	Agreed
3	Zero Corruption and conflict in the process of Implementation of school facilities	3.64	.579	Agreed
4	The emergence of honest and dedicated leaderships at the heads of educational ministries and parastatals.	2.85	.875	Agreed
5	Maintaining facilities to meet the needs requirement in practical skill development	3.56	.633	Agreed
6	Motivating staff on the need to continue practical teaching in MVM	3.70	.470	Agreed
7	Introducing innovations that will bring about improvement in academic standard of the school.	3.71	.599	Agreed
8	Assignment of duties to teachers to be based on specialization and expertise.	3.65	.489	Agreed

**N=80**

$\bar{X}$ = mean of the respondents

N<sub>1</sub> = Principals

N<sub>2</sub>= MVM teachers

**SD** = standard deviation of the respondents

Table 4.4 showed that both the Principals and MVM teachers agreed on all items from 1 to 15. This was because none of the mean response was below 2.50 which was the bench mark of agreed on the 4-point response options. The standard deviation score ranged between 0.470 and 0.875. This showed that the responses of the Principals and MVM teachers on the items were not divergent.

#### 4.5 Hypothesis 1

There is no significant difference in the mean response of Principals and MVM teachers on the level of availability of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state.

**Table 4.5 T-test on level of availability of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state.**

<b>N<sub>1</sub> = 10 AND N<sub>2</sub> = 70</b>							
<b>Respondents</b>	<b>N</b>	<b>X</b>	<b>SD</b>	<b>Df</b>	<b>Tcal</b>	<b>P-value</b>	<b>Remark</b>
<b>Principals</b>	10	3.52	0.50	63	0.549	0.06	NS
<b>MVM teachers</b>	70	3.67	0.62				

**N=80**

$\bar{X}_1$ = mean of principals

$\bar{X}_2$  = mean of MVM teachers

N<sub>1</sub> = principals

N<sub>2</sub>= MVM teachers

SD<sub>1</sub> = standard deviation of principals

SD<sub>2</sub> = standard deviation of MVM teachers

NS=Not Significant

Table 4.4 showed that there was no significant difference in the responses of Principals and MVM teachers on all the items as level of availability of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state; therefore the null hypothesis of no significant difference was upheld at 0.05 level of significance.

#### **4.6 Findings of the study**

The following are the main findings of the study; they are prepared based on the research questions and hypothesis tested.

1. The finding on the extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state available showed that all the respondents agree on all the items, among all is Energy stone/block cloth, Plug spanners, Magnet spanners
2. The finding on the extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state utilized showed that all the respondents agree on all the items, among all is Micrometer 0.25mm, 25-50mm, 50-75mm internal and external, Compressor (3phase motor-driven type complete with a spray gun, grease, hose).
3. The findings on Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state showed that all the respondents agree on all the items, among all is Lack of qualified teacher to instigate the availability and utilization of Facilities for teaching and learning of MVM, Embellzement of funds provided to make Facilities for teaching and learning of MVM available in the school.
4. The findings on various ways of managing Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state showed that all the respondents agree on all the items, among all is Provision of adequate Data to enable proper and adequate implementation of available facilities, Policies implementation on facilities should be made stable in respect of any change of government.

5. There was no significant difference in the responses of Principals and MVM teachers on the level of availability of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state

#### **4.7 Discussion of findings**

The result from table 4.1 shows the findings on the extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state available. The findings of the study among others shows the Toolboxes (comprising a set of flat, ring, half-round, and triangular files), Ball pein hammer, Hacksaws with extra blades, 300mm engineer rule socket spanners sets, with extension (6-32) open and flat spanners, Ring spanners (6-32mm), Energy stone/block cloth, Plug spanners, Magnet spanners, Allen keys, Feeler gauges, Oil cans, Vernier caliper with clock, Hand gloves/apron

The result of the hypothesis on the extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state available shows that there was no significant difference in the responses of Principals and MVM teachers on the level of availability of facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state.

Table 4.2 shows the result of the findings on the extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state utilized. The findings of the study among all shows the Micrometer 0.25mm, 25-50mm, 50-75mm internal and external, Compressor (3phase motor-driven type complete with a spray gun, grease, hose), Wheel balance (rim 13-15), Portable tire inflator, Weld master vulcanizer, Airline gauge, Steam cleaner (complete) oil-fired or electric, High-pressure washer, Tire changer complete with bead breaker, Various sizes of wheel braces, Blow lamps, Pipe wrench, clamp or vice, Wheel alignment gauge, Flat spanners (long and short), Clutch alignment gauge, Adjustable wrench, Injector repair machine

The result from table 4.3 reveal the findings on Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state. The findings of the study revealed that Lack of qualified teacher to instigate the availability and utilization of Facilities for teaching and learning of MVM, Embellzement of funds provided to make Facilities for teaching and learning of MVM available in the school, Unconcerned attitude of politicians or Government to make provision for school facilities as promised before assuming office, Number of Students is More than the available Facilities for teaching and learning of MVM, Poor attitude of MVMW teachers to wards improvisation of training equipment, Poor remuneration & lack of motivation discourage MVMW teachers from workshop practice, Students' laziness & lack of focus on skill acquisition in MVM trade

The result from table 4.4 reveal the findings on various ways of managing Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state. The findings of the study among others revealed that Provision of adequate Data to enable proper and adequate implementation of available facilities, Policies implementation on facilities should be made stable in respect of any change of government, Zero Corruption and conflict in the process of Implementation of school facilities, The emergence of honest and dedicated leaderships at the heads of educational ministries and parastatals, Maintaining facilities to meet the needs requirement in practical skill development, Motivating staff on the need to continue practical teaching in MVM, Introducing innovations that will bring about improvement in academic standard of the school, Assignment of duties to teachers to be based on specialization and expertise.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Summary of the Study**

The main focus of this research study was to assess the provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state.

Chapter 1 of the study discussed the background of the study, the statement of problem, purpose, significance, scope and the research questions were all stated and discussed for the conduct of this research.

The review of related literature looked into Motor Vehicle Mechanics Work Programme, Concept of School Facilities, Concept of Assessment, Concept of Provision, Concept of Utilization, Factors Hindering the Implementation of Available School Facilities in Nigeria, Ways of Managing the Factors Hindering the Implementation of Available School Facilities. Various views of different authors concerning the topic were harmonized in a comprehensive literature review and empirical studies.

A survey approach was used to developed instrument for the study; the respondents identified as the population of the study were the principals and MVM teachers. The entire respondents were used. A number of 80 questionnaires were administered. The instrument used was analysed using frequency count, and mean scores. The research questions were discussed base on the findings from the responses and results of the instrument used.

Implication of the study and conclusions were also drawn from the findings discussed. Recommendations and suggestions for further study were formulated and stated according to the findings of the study.

#### **5.2 Implication of the Study**

The findings of the study had implications for government, NBTE, curriculum planners, MVM teachers and students. The planners of NABTEB syllabus should continue to retain the tasks in

the formulation of syllabus in NTC curriculum. Likewise emphasis should be placed seriously on provision and utilization of facilities.

### **5.3 Conclusion**

School facilities remained one essential factor in the realization of the goals of education in Nigeria. This is because of its great role on teaching and learning process cut across the provision of essential services such as instructional facilities, infrastructural facilities, ICT materials and a conducive school physical environment. They play a different roles in the promotion of teaching and learning.

The national policy on education recognized the impact of these essential services to the successful running of schools in its blueprint. Though, it has not been ascertained if these facilities are adequately provided for in the studied schools, important to note was that they are viable tools for productive teaching and learning process

### **5.4 Recommendations**

Based on the findings of the study, the following recommendations were made:

1. Policies implementation on facilities should be made stable in respect of any change of government
2. Provision of adequate Data to enable proper and adequate implementation of available facilities
3. Bearing in mind that the provision of these facilities are capital intensive project, the study recommended that Government should intensified her effort to increase funding of the system and ensure it is timely done.

### **5.5 Suggestion for Further Studies**

The following are suggested for further studies:

1. Assessment of provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in other location



2. Maintenance practices for effective utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges.

## REFERENCES

- Abdulkadir, M., Mustapha, A., Hamidu, Y. M., Alawode, O. D., & Nma, T. N. (2020). Constraints of Motor Vehicle Mechanic Students in Entrepreneurship Development in Technical Colleges of Niger State. *Al-Hikmah Journal of Education*, 7(1), 10-16.
- Adeniyi-Egbeola, F. O. (2018). Towards Effective 'Almajiri' and Nomadic Education for Sustainable Development in Nigeria. *KIU Journal of Humanities*, 3(1), 7-14.
- Aguinis, H., Edwards, J. R., & Bradley, K. J. (2017). Improving our understanding of moderation and mediation in strategic management research. *Organizational Research Methods*, 20(4), 665-685.
- Barth, S., & De Jong, M. D. (2017). The privacy paradox—Investigating discrepancies between expressed privacy concerns and actual online behavior—A systematic literature review. *Telematics and informatics*, 34(7), 1038-1058.
- Brockmann, M., & Laurie, I. (2016). Apprenticeship in England—the continued role of the academic–vocational divide in shaping learner identities. *Journal of Vocational Education & Training*, 68(2), 229-244.
- Bwala, B. M. (2020). Assessment of Facilities for Teaching and Learning of Metalwork Technology in Colleges of Education in North Eastern States of Nigeria. *International Journal of Innovative Scientific & Engineering Technologies Research*, 8(2), 51-58.
- Choi, A. D., Abbara, S., Branch, K. R., Feuchtner, G. M., Ghoshhajra, B., Nieman, K., ... & Blankstein, R. (2020). Society of Cardiovascular Computed Tomography guidance for use of cardiac computed tomography amidst the COVID-19 pandemic Endorsed by the American College of Cardiology. *Journal of Cardiovascular Computed Tomography*, 14(2), 101-104.
- Duckworth, A. L., & Yeager, D. S. (2015). Measurement matters: Assessing personal qualities other than cognitive ability for educational purposes. *Educational Researcher*, 44(4), 237-251.
- Eric, A., & Ezeugo, C. R. (2019). Physical resources availability and the academic performance of students in the universal basic education scheme, Rivers State. *International Journal of Innovative Development and Policy Studies*, 7(1), 13-23.
- Evans, D. K., & Popova, A. (2016). What really works to improve learning in developing countries? An analysis of divergent findings in systematic reviews. *The World Bank Research Observer*, 31(2), 242-270.
- Federal Republic of Nigeria (FRN) (2014). National policy on education. (6<sup>th</sup> ed.) Lagos: Nigerian Educational Research and Development Council press.
- Frasquet, M., Mollá, A., & Ruiz, E. (2015). Identifying patterns in channel usage across the search, purchase and post-sales stages of shopping. *Electronic Commerce Research and Applications*, 14(6), 654-665.
- Ghavifekr, S., & Rosdy, W. A. W. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International journal of research in education and science*, 1(2), 175-191.

- Godstime, T. C., & Joseph, A. O. (2019). Influence of school environment on students' academic performance in technical colleges in Rivers State. *International Journal of New Technology and Research*, 5(3), 40-48.
- Hanna, R., & Olken, B. A. (2018). Universal basic incomes versus targeted transfers: Anti-poverty programs in developing countries. *Journal of Economic Perspectives*, 32(4), 201-26.
- Hearn, B. (2015). Institutional influences on board composition of international joint venture firms listing on emerging stock exchanges: Evidence from Africa. *Journal of World Business*, 50(1), 205-219.
- Jidda, N. A., Gidado, U., Idaya, A. S., & Wakili, B. M. (2018). Availability and Utilization of Resource for Teaching and Learning of Building Technology in Federal Colleges of Education (Technical) in North Eastern Nigeria. *Gombe Technical Education Journal*, 11(1).
- Kingsley, O. V. (2019). Management of learning facilities. *New Trends and Issues Proceedings on Humanities and Social Sciences*, 6(7), 82-87.
- Loukaitou-Sideris, A. (2021). Smart Playgrounds? Using Smart and Interactive Technologies to Combat Playground Underutilization. *Built Environment*, 47(2), 243-263.
- Mayer, R. E. (2019). Illustrations that instruct. In *Advances in instructional psychology* (pp. 253-284). Routledge.
- Ndirmbita, T. G., & Bwala, B. M. (2019). Evaluation of Facilities for Teaching and Learning of Automobile Technology in Colleges of Education in North-East Zone of Nigeria. *International Journal of Innovative Information Systems & Technology Research*. 7(1):50-59.
- Odoarefe, O. G., & Osa, I. F. (2018). Effects of computer graphics and animation instructional modes on junior secondary students' skills acquisition in business studies in Ibadan, Nigeria. *African Journal of Educational Management*, 19(01), 199-219.
- Ogbunaya, T. C., & Udoudo, E. S. (2015). Repositioning Technical and Vocational Education and Training (TVET) for Youths Employment and National Security in Nigeria. *Journal of Education and Practice*, 6(32), 141-147.
- Ogochukwu, E., & Gbendu, O. G. (2015). Extent of Implementation of Minimum Standards of Basic Education for the Realisation of the Second Millennium Development Goal in Bayelsa State. *Journal of Education and Practice*, 6(13), 121-130.
- Okoko, S. E., & Ibara, E. C. (2020). Provision and management of school plant in public secondary schools in Bayelsa state, Nigeria. *International Journal of Institutional Leadership, Policy and Management*, 2 (4), 679-691.
- Olaitan, O. O., & Udeh, J. O. (2020). Poverty reduction through identification of human resource developmental needs of teachers of technical, vocational education and training (TVET) programmes in technical colleges in Enugu state, Nigeria. *Academic Journal of Current Research*, 7(12), 43-52.
- Olaoye, A. O., Oyewusi, T. O., Ogunmilade, O. J., Ogundola, P. I., & Olaniyi, O. N. (2019). Pre-Vocational, Pre-Technical and Pre-Professional Programmes: Basic Tools for Vocational Technical Education and Training. *Journal of Education and Practice*, 10(26), 97-106.

- Oloke, O. C., Oni, A. S., Babalola, D., & Ojelabi, R. A. (2017). Incentive package, employee's productivity and performance of real estate firms in Nigeria. *European Scientific Journal*, 13(11), 246-260.
- Omar, M. K., Zahar, F. N., & Rashid, A. M. (2020). Knowledge, skills, and attitudes as predictors in determining teachers' competency in Malaysian TVET institutions. *Universal Journal of Educational Research*, 8(3), 95-104.
- Ramli, A., Zain, R. M., Campus, C., Chepa, P., & Bharu, K. (2018). The impact of facilities on students' academic achievement. *Sci. Int.(Lahore)*, 30(2), 299-311.
- Reeves, S., Boet, S., Zierler, B., & Kitto, S. (2015). Interprofessional education and practice guide no. 3: evaluating interprofessional education. *Journal of Interprofessional Care*, 29(4), 305-312.
- Richmond, D., Sibthorp, J., Gookin, J., Annarella, S., & Ferri, S. (2018). Complementing classroom learning through outdoor adventure education: Out-of-school-time experiences that make a difference. *Journal of Adventure Education and Outdoor Learning*, 18(1), 36-52.
- Schulze, S. S., Fischer, E. C., Hamideh, S., & Mahmoud, H. (2020). Wildfire impacts on schools and hospitals following the 2018 California Camp Fire. *Natural Hazards*, 104(1), 901-925.
- Shahsavari, A., & Akbari, M. (2018). Potential of solar energy in developing countries for reducing energy-related emissions. *Renewable and Sustainable Energy Reviews*, 90, 275-291.
- Torrance, H. (2017). Blaming the victim: Assessment, examinations, and the responsabilisation of students and teachers in neo-liberal governance. *Discourse: Studies in the Cultural politics of Education*, 38(1), 83-96.
- Udo, N. N., & Ubana, U. A. (2018). Cooperative learning and students' academic achievement in senior secondary school physics: implication for self-reliance in Nigeria. *Journal of Practicing*, 2(1), 54-63.
- Yen, T. S., & Halili, S. H. (2015). Effective teaching of higher order thinking (HOT) in education. *The Online Journal of Distance Education and e-Learning*, 3(2), 41-47.

**APPENDIX**  
**QUESTIONNAIRE**  
**FEDERAL UNIVERSITY OF TECHNOLOGY MINNA, NIGER STATE**  
**SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION**  
**DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION**

A QUESTIONNAIRE FOR PRINCIPALS AND MVM TEACHERS ON ASSESSMENT  
OF PROVISION AND UTILIZATION OF FACILITIES FOR TEACHING AND  
LEARNING OF MOTOR VEHICLE MECHANICS IN TECHNICAL COLLEGES IN  
NIGER STATE.

INTRODUCTION: Please kindly complete this questionnaire by ticking the column that best present your perception about the topic. The questionnaire is for research purpose and your view will be confidentially and strictly treated in response to the purpose of the research work.

SECTION A

PERSONAL DATA

Principal:

MVM teachers:

Note: A four (4) point scale is used to indicate your opinion, tick the options which best describe your agreement as shown below:

Strongly Agree                      (SA) =        4points

Agree                                      (A) =        3points

Disagree                                (D) =        2points

Strongly Disagree                    (SD) =       1points

Section B: To what extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state available?

S/N	Items	Scales			
		SA	A	D	SD
1	Toolboxes (comprising a set of flat, ring, half-round, and triangular files)				
2	Ball pein hammer				
3	Hacksaws with extra blades				
4	300mm engineer rule socket spanners sets, with extension				
5	(6-32) open and flat spanners				
6	Ring spanners (6-32mm)				
7	Energy stone/block cloth				
8	Plug spanners				
9	Magnet spanners				
10	Allen keys				
11	Feeler gauges				
12	Oil cans				
13	Vernier caliper with clock				
14	Hand gloves/apron				
15	Surface plates				
16	Vee blocks				
17	Micrometer 0.25mm, 25-50mm, 50-75mm internal and external				
18	Compressor (3phase motor-driven type complete with a spray gun, grease, hose)				
19	Wheel balance (rim 13-15)				
20	Portable tire inflator				
21	Weld master vulcanizer				
22	Airline gauge				
23	Steam cleaner (complete) oil-fired or electric				

24	High-pressure washer				
25	Tire changer complete with bead breaker				
26	Various sizes of wheel braces				
27	Blow lamps				
28	Pipe wrench, clamp or vice				
29	Wheel alignment gauge				
30	Flat spanners (long and short)				
31	Clutch alignment gauge				
32	Adjustable wrench				
33	Injector repair machine				
34	Injector needle service kit				
35	Pullers, different sizes				
36	Spark plug tester				
37	Workbench with vices				
38	Portable engine hoist				
39	Electrical test bench				
40	Honing machine with accessories and assorted cutters				

Section C: To what extent are facilities for teaching and learning motor vehicle mechanics in technical colleges in Niger state utilized?

S/N	Items	Scales			
		VHE	HE	LE	VLE
1	Toolboxes (comprising a set of flat, ring, half-round, and triangular files)				
2	Ball pein hammer				
3	Hacksaws with extra blades				
4	300mm engineer rule socket spanners sets, with extension				
5	(6-32) open and flat spanners				
6	Ring spanners (6-32mm)				
7	Energy stone/block cloth				

8	Plug spanners				
9	Magnet spanners				
10	Allen keys				
11	Feeler gauges				
12	Oil cans				
13	Vernier caliper with clock				
14	Hand gloves/apron				
15	Surface plates				
16	Vee blocks				
17	Micrometer 0.25mm, 25-50mm, 50-75mm internal and external				
18	Compressor (3phase motor-driven type complete with a spray gun, grease, hose)				
19	Wheel balance (rim 13-15)				
20	Portable tire inflator				
21	Weld master vulcanizer				
22	Airline gauge				
23	Steam cleaner (complete) oil-fired or electric				
24	High-pressure washer				
25	Tire changer complete with bead breaker				
26	Various sizes of wheel braces				
27	Blow lamps				
28	Pipe wrench, clamp or vice				
29	Wheel alignment gauge				



30	Flat spanners (long and short)				
31	Clutch alignment gauge				
32	Adjustable wrench				
33	Injector repair machine				
34	Injector needle service kit				
35	Pullers, different sizes				
36	Spark plug tester				
37	Workbench with vices				
38	Portable engine hoist				
39	Electrical test bench				
40	Honing machine with accessories and assorted cutters				

Section D: What are the Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state?

S/N	Skill Items	Scale			
		SA	A	D	SD
1	Lack of qualified teacher to instigate the availability and utilization of Facilities for teaching and learning of MVM.				
2	Embellzement of funds provided to make Facilities for teaching and learning of MVM available in the school				
3	Unconcerned attitude of politicians or Government to make provision for school facilities as promised before assuming office.				
4	Number of Students is More than the available Facilities for teaching and learning of MVM.				
5	Poor attitude of MVMW teachers to wards improvisation of training equipment.				

6	Poor remuneration & lack of motivation discourage MVMW teachers from workshop practice				
7	Students' laziness & lack of focus on skill acquisition in MVM trade				

Section E: What are the various ways of managing Factors affect effective provision and utilization of facilities for teaching and learning of motor vehicle mechanics in technical colleges in Niger state?

S/N	Skill Items	Scale			
		SA	A	D	SD
1	Provision of adequate Data to enable proper and adequate implementation of available facilities				
2	Policies implementation on facilities should be made stable in respect of any change of government.				
3	Zero Corruption and conflict in the process of Implementation of school facilities				
4	The emergence of honest and dedicated leaderships at the heads of educational ministries and parastatals.				
5	Maintaining facilities to meet the needs requirement in practical skill development				
6	Motivating staff on the need to continue practical teaching in MVM				
7.	Introducing innovations that will bring about improvement in academic standard of the school.				
8.	Assignment of duties to teachers to be based on specialization and expertise.				