

**FACTORS INHIBITING THE ACQUISITION OF BUILDING TRADE
SKILLS AMONG TECHNICAL COLLEGE STUDENTS IN NIGER STATE.**

BY

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FEDERAL UNIVERSITY OF TECHNOOOGY, MINNA**

MARCH, 2023

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**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF
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AND TECHNOLOGY EDUCATION**

MARCH, 2023

DECLARATION

I HABAKKUK DOMA **Matric No:** 2015/1/58540TI an undergraduate student 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 other diploma or degree of this or any other university

HABAKKUK DOMA
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Signature & Date

CERTIFICATION

This project has been read and approved as meeting the requirements for the award of B. Tech degree in Industrial and Technology Education, School of Science and Technology Education, Federal University of Technology, Minna.

Mr. ABUTU FRANCIS
Project Supervisor

Sign & Date

Dr. T. M. Saba
Head of Department

Sign & Date

External Examiner

Sign & Date

DEDICATION

The researcher hereby dedicate this project work to my family, for their support and prayers.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude and appreciation to God almighty who contributed to the successful completion of this research project. All glory be to God.

Firstly, I extend my deepest thanks to my supervisor Mr Abutu Francis for his invaluable guidance, support, and encouragement throughout this journey. His expertise and insights were instrumental in shaping the direction of the project and ensuring its successful execution.

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ABSTRACT

Abstract: The construction industry in Niger State, Nigeria, is experiencing a shortage of skilled workers due to the insufficient acquisition of building trade skills among technical college students. This study aims to identify the factors inhibiting the acquisition of these skills among technical college students in Niger State. The study will be conducted through a mixed-methods approach, utilizing both quantitative and qualitative data collection methods. A survey will be administered to a sample of technical college students in Niger State, and interviews will be conducted with key stakeholders in the construction industry. The data collected will be analyzed using descriptive and inferential statistics and content analysis techniques. The results of the study will inform policies and interventions aimed at improving the acquisition of building trade skills among technical college students in Niger State. Ultimately, this study seeks to contribute to the development of a skilled and competent workforce in the construction industry, thereby fostering economic growth and development in Niger State and Nigeria as a whole.

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CHAPTER ONE

1.0

INTRODUCTION

1.1 Background to the Study

In Nigeria, technical college is one of the principal Technical and Vocational institution saddled with the responsibility for training craftsmen at the craft and advanced craft levels. In describing the goals of technical colleges, the Federal Republic of Nigeria in her National Policy on Education (FRN, 2017) stated that trainees completing technical college programmes shall have three options: secure employment either at the end of the whole programme 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 advance craft/technical programme and in post-secondary (tertiary) technical institution such as Science and Technical colleges, polytechnics, college of technology, colleges of education, pyrotechnics and universities.

The technical colleges prepare students for the National Technical Certificate (NTC) and Advanced National Technical Certificate (ANTC) examinations leading to the production of craftsmen and master craftsmen. Training in various vocations or trade areas at technical colleges is carried out in Technical College (TC) one, two and three (TC I, II and III) and runs for a period of three years for the award of NTC and extra additional years for the award of ANTC depending on the trainee entry period and capability (NBTE, 2017). A technical college is post primary technical institution established to offer vocational technical programmes. It is established to equip students with technical skills to earn a living. Akpan (2019) said that technical college is equivalent to senior secondary but designed to prepare individuals to acquire practical skills, basic scientific knowledge and attitude required as craftsmen and technicians at

sub-professional level. According to Okorie (2018), a technical college in Nigeria is established to prepare individual to acquire practical skills and basic scientific knowledge. It is charged with the production of skilled personnel in the area of mechanical technology, metal work, electrical/electronic technology, wood work and building technology for the needs of society.

Building technology is one of the courses offered in Nigeria technical colleges. Almost all the members of the society benefit from the products of building technology. Building technology programme at the technical college level is designed to produce skilled builders for the building industry. Building technology as a course comprises of different components or operations which require skills to perform them. These components include designing of building plans, setting out of the building, execution, block work on the concrete foundation, levelling of the building, roofing pattern, plastering and rendering of walls. These areas of operation require that students of building technology should possess the necessary skills to carry them out. Building technology students should possess skills in designing building plans and be able to read and interpret them. Students of building technology should possess skills in setting out of buildings, form block walls on the concrete foundation, be able to level the building and also possess skills in designing good roofing pattern.

Building technology is one of the vocational programmes offered in technical colleges. It is designed to produce building technicians for the construction/building industry. In building technology according to Okparaeke (2017), students are expected to work with materials, tools, equipment and machines to mould blocks, carry out preliminary site operations, concreting, block wall construction and finishing in the building industry. In building technology according to Odu (2021) students learn building construction,

brick/block laying, technical drawing, building drawing, construction management, surveying and quantity surveying. The curriculum for building technology by the National Board for Technical Education (NBTE) is made up of 60 percent theory and 40 percent practical. The aim of this initiative is to increase the technological growth of the country and to allow students to acquire more technical skills. In spite of Federal Government's emphasis on improving technology, building technology students still find it difficult to acquire building skills that can make them functional in the society after graduation. Students of building technology graduate with little or no building skills at all to enable them work in building industries or firms or to be self-employed. These graduates need necessary building skills in order to take up job in building industries that are now springing up here and there (Okoro, 2019). Skills are needed to service the sophisticated technical equipment that are now being imported into the country (Aliozor, 2017). Acquisition of saleable skills is the answer to the unemployment among the youths. Erewani (2016) explained that the level of unemployment in a state is indicative of the quality and quantity of manpower available. Nzeagu (2019) also said that the main cause of unemployment among school leavers is lack of training and skills. In order to reduce unemployment among building technology students after graduation and for them to contribute their quota to the development of the state, building skills need to be taught by technical teachers, modern building technology tools and equipment for teaching relevant skills in building must be readily available, also good teaching strategies must be used to teach building skills to the students and correct evaluation strategies are to be applied to evaluate students' performance both with and outside school.

Without acquiring building skills, graduates of building technology can never be functional in the society. Building skills are teachable skills. They can only be acquired

when relevant materials, tools and equipment are available for teaching. Relevant tools and equipment enhance practical teaching and learning process. Quality of instructions offered to the students depends on the teaching strategies employed. The process of offering quality instructions to students involves the use of sophisticated tools, equipment and machines, delicate materials and complex methods of work. This now demands for skilled graduates to be involved in building technology practices in the state. Hence, it is imperative to determine strategies for improving skill acquisition of building technology students in technical colleges that will enable them to function effectively in Niger State.

Building technology is an aspect of vocational technical education. Vocational technical education is an education for work. According to Uwaifor (2019), vocational technical education is any form of education whose purpose is to prepare person(s) for employment in an occupation or group of occupations. Rolalrand (2017) stated that vocational technical education is the acquisition of skills and techniques in chosen occupation or profession to enable an individual earn a living. Adeyemi and Uko (2016) viewed vocational technical education as an aspect of education which leads to the acquisition of practical and applied skills. Skills involve the ability to do something well. Skills according to Wikipedia (2021) are the learned capacities to carry out pre-determined results often with minimum outlay of time and energy. Skill according to Okorie (2018), is a manual dexterity through repetitive performance of an operation. He further explained that skill is expertness, practised ability, dexterity of tact. It is well established habits of doing things by the people. Skills could be gained through experience and training on skill acquisition and development (Bakare, 2016).

Skill acquisition according to Aliozor (2017), is the process by which individuals are expected to learn and continuous practice in particular task till the learner becomes proficient in the operation and can perform them when required. Okorie (2018) said that skills are acquired when procedural instructions are matched with performance activities. For skills to be acquired, there must be opportunities for participation and practice of such skills under real life situation. Skill acquisition is very necessary at this stage of Nigeria's economic and technological development. Olaitan (2020) said that the acquisition of skills prepares students for vocational occupation and progressive development in it. Skill acquisition remains the major goal of vocational technical education and this helps to satisfy the personal work needs of both the individual and the society (Aliozor, 2017). To acquire skills in vocational technical education courses such as building technology at technical college level, opportunities must be provided for students to practice the skills they are taught in an environment that is relevant to the job skills learnt. Such opportunities that should be provided that may improve skill acquisition of building technology students include field trip/excursion, allocation of more time for practical work, production unit, provision of materials to practice with.

1.2 Statement of the Problem

Building technology programme in technical colleges is aimed at producing skilled craftsmen who will be able to perform basic functions in building technology both in private and public sector (NBTE, 2017). Building technology is a skill oriented programme whose graduates are expected to be self-employed or set – up their businesses after graduation but rather than being self-employed or set up businesses in the area they were trained.

The Nigeria government skill acquisition effort through establishment of technical colleges and the running of building technology programme is supposed to enhance

effective acquisition of technical skills in setting out of building, building drawing, block laying and construction management. This effort is expected to empower graduates of building technology with the required work skills for self-reliance and employment in various occupations in the construction industries to enhance construction development in Nigeria. Despite several government efforts, many industries complained that over 60 percent of Nigeria building trade graduates lack the required work skills for employment thereby inhibiting their access to contribute meaningfully to construction development (Ngozi, 2016). It appears as if several building technology graduates are still unemployed because they find it difficult to practice their trades upon graduation due to poor skills acquired during training in school. A clear indicator to support the existence of skill acquisition problems is the alarming rate of youth unemployment suffered by technical college graduates.

Odigiri and Ogwo (2018) revealed that the technical skills acquisition in Nigeria's technical colleges is bedevilled with numerous inhibitions bothering on the building technology teachers and trainees. The inhibitions faced by technical college building technology programme in attaining effective skill acquisition in Nigeria could be the possible reason why most Nigeria construction industries depend more on expatriate artisans, craftsmen and technicians who are highly paid and valued than their Nigeria counterpart. It is therefore imperative to carry out a survey of the inhibitions to skill acquisition in technical college building trade programme in Niger State, Nigeria.

1.3 Purpose of the Study

The purpose of this study is to assess the factors inhibiting acquisition of building trade skills among technical college students in Niger State. Specifically, the study seeks to:

- i. Identify the teacher related factors inhibiting acquisition of building technology skills among technical college students in Niger State.

- i. Identify the student related factors inhibiting acquisition of building technology skills among technical college students in Niger State.
- i. Identify strategies for improving the acquisition of building technology skill among technical college students in Niger State.

1.4 Significance of the Study

The findings of this study will be of benefit to the teachers of building technology, students of building technology, the communities where the institutions are located, the government and researchers. The findings of the study will benefit teachers of building technology in the following ways. It will help building technology teachers to teach those saleable building technology skills that may enhance the students' performance after graduation. The teachers will use the identified strategies for improving skill acquisition of building technology students to teach the students thereby reducing unnecessary stress. The teachers of building technology in collaboration with school administrators will use the evaluation strategies determined by this study to evaluate the students' performance both within and outside school. Teachers in technical colleges shall benefit from the findings of this study, when published, see the need to improve the teaching of skills acquisition and to identify the materials needed in acquiring those skills. The skill required by building technology teachers identified in the study will expose their current deficiencies in teaching skill acquisition in technical colleges, such exposure will lead them to further training for skill acquisition which will eventually lead them to acquisition of the required skill in building technology, which would now qualify them in teaching the required building technology skills in technical colleges with self-confidence and satisfaction.

The findings of this study will be of benefit to the students of building technology. If the findings of this study are properly implemented, the students of building technology will graduate with enough saleable skills that can make them to be self-employed or work in the construction industries, building technology tools and equipment to establish their own business will be known to them, thereby reducing unemployment among students after graduation. The study will also be useful to research students and research organizations since the research report will provide an important source of literature for further studies relative to the issue. Building technology students will benefit from the findings of the study by having a sound teaching from their teachers who have now acquired the required skill in building technology and are teaching the needed skill that can be found in the building sector outside class room.

Communities will also benefit from the findings of the study in the following ways: If the findings are properly implemented, the result will be that students of building technology will begin to establish building outfit for themselves and thereby developing the area. As the businesses grow, they create job opportunities for others to be employed. When this happens, it does not only develop the community but also helps to reduce unemployment, crimes and other social vices among youths. The schools from where these students graduate will benefit from the findings of this study in this specific way. If the institutions have functional production unit, then the production unit will not only generate fund for the school but can as well undertake some infrastructural development in the school at a very low cost.

The findings of this study if properly implemented will benefit construction industries, the construction industries will have enough skilled personnel who possess relevant building skills that can make them excel and face challenges in their workplace. The

study will also help the construction industries to have enough skilled building technicians to take care of their work needs.

The findings of this study will provide useful information to the government, the school management board, especially, National Board for Technical Education, curriculum planners on the strategies for improving skill acquisition. The identified strategies will be integrated into the building trade's curriculum in order to teach students. These findings of this study will also be of benefit to the Government through Ministry of Education and Ministry of Science and Technology by using the information provided to come up with measures that will ensure effective supply of building technology tools and equipment, and recruitment of qualified teachers. The government will also find it rewarding for providing people of the state with sound technical education and feeding building technology workshops with qualified and competent technicians who can be relied upon for credible maintenance and repairs of these equipment.

The findings of this study could be used by National Board for Technical Education (NBTE) as a quality control body to incorporate suitable programme that can enhance skill acquisition competencies in building technology profession.

The result of the study would help the workshop personnel/building technology technicians to effectively guide themselves and the students when working on machine or making use of tools during practical works. Understanding the result of this study would also help the workshop personnel and workers to take adequate care of tools and equipment in the workshop by keeping them clean and placing them in their proper position in the work area.

Parents of building technology students will benefit from this study by having their children obtaining jobs after graduation thereby fulfilling their (parents) dream of having value for their long term investment in their children's education.

1.5 Scope of the Study

This study is delimited to the factors inhibiting acquisition of building technology skills among technical college students in Niger State, Nigeria. The study also covers teacher's related factors inhibiting acquisition of building technology skill among technical college students in Niger State, student's related factors inhibiting acquisition of building technology skills among technical college students in Niger State, societal related factors inhibiting acquisition of building technology skills among technical college students in Niger State and strategies for improving acquisition of building technology skills among technical college students in Niger State

1.6 Research Questions

The following research questions will guild the study: -

1. What are the teacher's related factors inhibiting acquisition of building technology skills among technical college students in Niger State?
2. What are the student's related factor inhibiting acquisition of building technology skills among technical college students in Niger State?
3. What are the strategies for improving the acquisition of building technology skills among technical college students in Niger State?

1.7 Hypotheses

The following null hypothesis was formulated and will be tested at 0.05 level of significance.

HO₁: There will be no significant difference in the mean response of building technology teachers and students on the teacher's related factors inhibiting acquisition of building technology skills among technical college students in Niger State.

HO₂: There will be no significant difference in the mean response of building technology teachers and students on the student's related factors inhibiting acquisition of building technology skills among technical college students in Niger State.

HO₃: There will be no significant difference in the mean response of building technology teacher and students on the strategies for improving the acquisition of building technology skills among technical college students in Niger State.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The related literature shall be reviewed under the following sub-heading

2.1 Conceptual Framework of the Study

2.1.1 Technical College Education System in Nigeria

- 2.1.2 Building Technology Programme in Technical Colleges
 - 2.1.3 Skill Acquisition in Building Technology
 - 2.1.4 Teacher Related Factor Inhibiting Acquisition of Building Technology Skill
 - 2.1.5 Student Related Factor Inhibiting Acquisition of Building Technology Skill
 - 2.1.6 Societal Related Factor Inhibiting Acquisition of Building Technology Skill
 - 2.1.7 Strategies for improving the acquisition of building trade skills in technical colleges
- 2.2 Theoretical Framework of the Study
 - 2.2.1 Theory of Skill Acquisition
 - 2.2.2 Dreyfus Model of Skill Acquisition
 - 2.3 Related Empirical Studies
 - 2.4 Summary of Literature Review

2.1 Conceptual Framework of the Study.

Concept is a distinctive meaning of a term, word or phrase that symbolizes several ideas. Concept is a medium of organizing knowledge about the world to categorize information (Nnadi, 2019). Nnadi went further to state that a concept may mean tangible things such as chair, house, table, rock, stone, book, boy, girl, woman, man etc. Ekon (2019) stated that concept is an idea, thought or devolution of abstract system of thoughts, by which science investigates, interprets and understands particular segments of reality or phenomena. It is a distinctive meaning of a term, that is, whatever is meant by word or phrase that symbolizes several interrelated ideas which may mean tangible things.

Framework according to Hornby (2019), is the structure of ideas and how they are arranged to give a functional meaning to an event. While conceptual framework as explained by Okonkwo (2020), involves the definitions of various terms associated with a particular study. However, conceptual framework, as used in the context of this study involves the explanation of the new terminologies that are used in a special way for the purpose of the study. The concepts in this study include: skill improvement, automobile maintenance, technical college graduates, motor vehicle mechanic, safety skill in motor vehicle mechanic trade, strategies for improving safety skills in maintenance operation, problems associated with safety skill in maintenance operation, safety skills in maintenance operation. These concepts will be explained one after the other in order to substantiate and give meaning to the study thus.

2.1.1 Technical College Education in Nigeria

Technical college education is an aspect of education that deals with acquisition of practical skills in an attempt to produce technical man-power which can lead to self-reliance from the acquired skills in technical colleges. Federal Government of Nigeria FGN (2015), indicates that technology education is a programme through which practical and applied skill is acquired or obtained starting from technical college. Technical colleges are institutions that provide students with knowledge on skills manipulation to enable them use their brain and hands to produce objects.

In the view of Okoro (2019), technical college is a principal vocational institution in Nigeria, which is designed to prepare individuals to acquire practical skills, knowledge and attitude required of technicians at sub-professional level. Ogbuanya and Osoro (2019) sees technical education as special training which help to qualify a person to engage in branches of productive industry. Ogbuanya and Osoro (2019) further stated

that the specialized education may consist of the explanation of the processes in production or of instruction in art and science in its relation to industry but it may also include the acquisition of the manual skills which production necessitates.

In a related view Ogbuanya and Osoro (2019) defined vocational technical education and training as those learning activities designed to facilitate the acquisition of practical and applied skills and attitudes, which contribute to successful economic performance. Also Samuel (2020) viewed vocational and technical education as a multidisciplinary and pragmatic field of study, which is aimed at equipping the individuals with requisite vocational and technical education skills, which will enhance their relevance and functionality in the society. Technical Education may also be considered as a kind of education, knowledge or training which is available and accessible in technical colleges. Makama (2017), noted that the courses run by technical colleges are departmentalized to ensure that students are given training in specific trades for effective performance. Some of the trades in these colleges include electrical installation, electronics, metal work technology, auto mechanic technology, etc. which are practically oriented. FRN (2015), highlighted some electrical engineering trades being offered in technical colleges to include: electrical installation and maintenance work, radio, television and electrical work and appliances repairs. These trades/courses are being offered in order to produce technological minded individuals, who can use their brains and hands to manipulate things for meaningful development in the world of technology.

According to Umunadi (2019), Technical Colleges are principal vocational institutions in Nigeria which are designed to prepare the individuals to acquire practical skills, knowledge and attitudes at sub-professional level, primarily established to train

craftsmen in various occupations. Okorie (2018), also sees Technical Colleges as institutions where craftsmen are trained up to the National Technical certificate (NTC) level issued by the National Business and Technical Examination Board (NABTEB). Students who have completed the junior secondary schools' education and the successful products of the vocational training centres are legible for admission to Technical Colleges. Technical Colleges are therefore, schools or training institutions where trades are being taught. Technical colleges train craftsmen in several areas which include: Metal work practice; Fabrication and welding; electrical installation, Block laying and Concreting, Carpentry and joinery; and Furniture making. These activities are done in the workshops. Workshops play very important roles in technical colleges and workshop safety is of very serious concern to Technical Colleges. Practical works in the workshops require tools and techniques that are inherently dangerous. When working in the workshop it is important to protect the eyes, ears, and lungs, and to take great care when using hand and machine tools.

2.1.2 Building Technology Programme in Technical College

Building technology is one of the courses offered in Nigeria Colleges of Education. Almost all members of the society benefits from the products of building technology. Building technology programme at the technical college level is designed to produce skilled builders for the building industry. Building technology as a course comprises of different components or operations which require skills to perform them. These components include designing of building plans, setting out of the building, lock work on the concrete foundation, levelling of the building, roofing pattern, plastering and rendering of walls. These areas of operation require that students of building technology should possess the necessary skills to carry them out. Building technology students

should possess skills in designing building plans and be able to read and interpret them. Students of building technology should possess skills in setting out of buildings, form block walls on the concrete foundation, be able to level the building and also possess skills in designing good roofing pattern.

Building technology is one of the vocational programmes offered in college of Education. It is designed to produce building technicians for construction/ building industry. In building technology according to Okparaeke (2017), students are expected to work with materials, tools, equipment and machines to mould blocks, carry out preliminary site operations, concreting, block wall construction and finishing in the building industry. In building technology according to Odu (2021) students learn building construction, brick/block laying, technical drawing, building drawing, construction management, surveying and quantity surveying. The curriculum for building technology by the National Board for Technical Education (NBTE) is made up of 60 percent theory and 40 percent practical. The aim of this initiative is to increase the technological growth of the country and to allow students acquire more technical skills. In spite of Federal Government's emphasis on improving technology, building technology students still find it difficult to acquire building skills that can make them functional in the society after graduation. Students of building technology graduate with little or no building skills at all to enable them work in building industries or firms or to be self-employed. Skills are needed to service the sophisticated technical equipment that are now being imported into the country (Aliozor, 2017).

Acquisition of saleable skills is the answer to the unemployment among the youths. Erewani (2016) explained that the level of unemployment in a state is indicative of the quality and quantity of manpower available. In order to reduce unemployment among

building technology students after graduation and for them to contribute their quota to the development of the state, building skills need to be taught by technical teachers, modern building technology tools and equipment for teaching relevant skills in building must be readily available, also good teaching strategies must be used to teach building skills to the students and correct evaluation strategies are to be applied to evaluate students' performance both within and outside school. Without acquiring building skills, graduates of building technology can never be functional in the society. They can only be acquired when relevant materials, tools and equipment are available for teaching. Relevant tools and equipment enhance practical teaching and learning process. Quality of instructions offered to the students depends on the teaching strategies employed. The process of offering quality instructions to students involves the use of sophisticated tools, equipment and machines, delicate materials and complex methods of work. This now demands for skilled graduates to be involved in building technology practices in the state. Hence, it is imperative to determine strategies for improving skill acquisition of building technology students in College of Education that will enable them to function effectively in the society.

Building technology programme in Colleges of Education is aimed at producing skilled craftsmen who will be able to perform basic functions in building technology both in private and public sector (NBTE, 2017). Building technology is a skill oriented programme whose graduates are expected to be self-employed or set-up their businesses after graduation but rather than being self-employed or set up businesses in the area they were trained many have turned to what is popularly known today as "OKADA" operators while others become hawkers in cities. It has been observed that the objectives have not been achieved over the years. This is because the graduates of vocational technical education from college of education, especially in building

technology, still roam the street joylessly. Some have become hawkers while some have turned into “OKADA” riders. Unemployment among youths appear to be shooting up the sky (Victor, 2020). This may be due to little or no skill acquired by the students during training in college of education. The consequences of joblessness among youths according to Oyebode (2019) include burglaries, robbery, psychological and financial stresses, fear, anxiety, aggression, frustration, prostitution, drug addiction, vagrancy, poverty, hunger and diseases. It is a common observation that youths today do not want to work but want to become millionaires overnight. This has become a national issue, hence many youths have involved themselves in social vices such as armed robbery, kidnapping, vandalization of pipe lines and cultism, in order to make quick money. Many youths do not want to make use of their ten fingers. The reason is simply because they do not possess necessary skills in the area that they were trained, and as a result they have no confidence in themselves to set up business.

Good possession of relevant building skills that will enable building technology students set up businesses or become self-employed may reduce joblessness and social vices among them after graduation. Therefore, there is need for carrying out a study to determine strategies for improving skill acquisition of building technology students in College of Education that will enable them function effectively in the society.

2.1.3 Skill Acquisition in Building Technology

Vocational education is the education for work. It is all about skill. There is the need to assist people to learn and acquire appropriate knowledge, habits of thought and conduct, skill as well as other qualities of character that will enable them to develop intellectually, socially, physically, emotionally, morally, spiritually, politically and economically (Aliozor, 2017). Skill acquisition is one of such ways of learning. Mgbeahurike (2020)

described skill acquisition as a process by which individuals are exposed to the learning and continuous practices in a particular task till the learner becomes proficient in the operation and can perform them when required. Skills are therefore, acquired first and developed subsequently, through utilization and practice. According to Okorie (2018), skills are acquired when procedural instructions are matched with performance activities. He added that repetition is the watchword. Aliozor (2017) said that for students to acquire skills in vocational education courses such as building technology, metal work, woodwork etc. opportunity should be provided for them to practice the skills they are taught in an environment that is relevant to the job skills learnt. For instance, science laboratories are provided in studying sciences, and the students are taught the practical aspect of the subjects. In the same manner, typing pools, office practice and language laboratories, computer rooms or laboratories are for business and computer education. Workshops are for technical education students where skills can be acquired. To acquired skills according to Okorie and Ezeji (2019), three factors are involved; they include imitation, repetition and participation. To imitate implies to mimic or copy the behaviour or acts of the teacher by students. As they watch the teacher perform certain acts, they consciously or unconsciously follow and practice the examples of the teacher. Repetition involves the performance of an act many times to master the act. They highlighted that after acquiring a skill, the learner must repeat the action many times before he attains any useful degree of readiness. Participation in vocational education involves the learners practicing under the actual production conditions or situations. They adduced that both the imitation of a master and frequent practice, fall short of complete preparation for skilled vocational practice, hence the need for practice by the learner in the actual production conditions.

Mgbeahurike (2020) observed that the process of skill acquisition involves the following; observation, imitation, manipulation, performing and perfecting. Olaitan (2020) explained that in the course of developing skills in an occupation, knowledge and ability required for success in that occupation should be taught. This is because skills consist of habits, which must ensure adaptation. The acquisition of skill is important in vocational education since it is occupationally oriented. Okorie (2018) said that if education is preparation for life and if practically every one's life and opportunities for self-expression and fulfilment include work and skills possessed, then only the successfully employable are successfully educated and skilled. Thus acquisition of skills in vocational education could help the learner to;

- I. Cultivate a right attitude to work.
- II. Have a good sense of duty and respect for the dignity of labour
- III. Be self – sufficient, that is, prepare the learner to be worthwhile in vocational education activities or as business owners.
- IV. Acquire saleable skills needed to improve the production, marketing and exchange of raw materials for man and industries.

Olaitan (2020) observed that acquisition of skills prepares students for vocational occupation and progressive development in it. Hence, the need for development of acquired skills in vocational occupation is necessary as one may possess a skill yet the skill is not developed. Skills are built up through repetition and participation. Okorie (2018) stressed that repetition and participation should always be provided else it will result in production of half – baked rather than skilled performer. Olaitan (2020), submitted that instruction is not completed until students have used the abilities and

competencies being taught. The relevance of acquisition of skills on the part of vocational education graduates or her teachers is that it equips the teachers as well as those who acquired them well enough to be able to apply the relevant skills acquired and developed in the management of their laboratories and other members of staff (Aliozor, 2017). Skill acquisition in building technology to Nigerians economy cannot be over – stressed. People who have acquired skills in different spheres of life endeavours are sure to be either self-employed or they secure related employment in government agencies or in private business organization. Okoro (2019), pointed out that the purpose of vocational education is not to reduce people’s need for work but rather to make more pleasant and productive. Skill acquisition remains the major goal of vocational education and this helps to satisfy the personal work needs of both the individual and the society. Okoro (2019) described the following areas as special areas where skill acquisition plays great and significant roles;

Income if people are equipped with the skills and knowledge required by the society, vocational education makes it possible for them to find work. This work gives them income. Skill acquisition and development are very necessary at this stage of Nigeria’s economic and technological development. People need skills in order to take up the jobs in industries and business organizations that are now growing here and there. These skills are needed to service the sophisticated technical equipment that is now being imported into the country.

2.1.4 Teacher Related Factors Inhibiting Acquisition of Building Technology Skill

Researchers appear to agree that burnout is not easily defined. Byrne (1994) recognizes the difficulty in defining burnout by stating that to date there is not a universally accepted definition of burnout. While defining teacher burnout Cater (2021) says that burnout is an occupational hazard which all members of helping professions are exposed to, including teachers. He goes on to define teacher burnout as physical, emotional and attitude exhaustion that begins to gradually slip away. In a paper presented at the East Central Africa Division Teachers Convention Amimo (2019) further defines burnout as a figurative expression of a situation of extinction of energy, motivation or incentive which implies a change in attitude and behaviour in response to a demanding frustrating and unrewarding work experience. After making an observation in one school within the District of Columbia, Maeroff (2018) also came up with some causes of teacher burnout such as much paper work and too much work load due to understaffing, lack of resources, monotony or lack of variety in instruction and taking the teaching job too seriously.

Mayben (2020) in his action research project wondered which is the cause of the other between teacher burnout and student apathy. He asks whether it could be possible that teacher burnout has caused the apathy in students or whether students' apathy became prevalent that almost three fourth of teachers have reached teacher burnout stage. Maeroff (2018) stated that apathy is the main impediment to academic development in American schools. He further observes that if high academic standards should be achieved by all students, then it is feasible to assume that it could create stress if the students did not care to develop their academic skills. In the educational environment, Cunningham (2021) claims that teacher burnout results into reduced pupil teacher rapport, teacher warmth, teacher satisfaction, pupil motivation and intimately teaching effectiveness. He further observed that this burnout will result into absenteeism from

school, truancy, drunkenness, career changes and early retirement. All this will trickle down to poor performance in school. Farbers (2019) adds to the effects of teacher burn out by claiming that teachers who become burned out may be less sympathetic towards students, may have lower tolerance for frustration in the classroom, may plan for their classes less often or less carefully, may fantasize about or actually plan on leaving the profession, may feel frequently emotionally or physically exhausted, may feel anxious, irritable, depressed and in general less committed and dedicated to their work. Causes and effects of burn out are yet to be found out if they are also factors affecting skill acquisition.

2.1.5 Student Related Factors Inhibiting Acquisition of Building Technology Skill.

Sena (2021) note that students' characteristics included age, sex, position of birth, possession of exercise books for each subject, sharing textbooks, academic attainment of father and mother, education and occupation of brothers and sisters, time spent on homework and aspirations. These factors have also been anticipated to affect skill acquisition. Age related factors affecting performance had earlier on been investigated. Richardson (2021) comments on a context of an early study which was carried out in the USA that mature students appeared to be able to adjust successfully to the requirements of a situation designed for younger learners. This is an interesting observation particularly for this study where elderly students are going back to class after a long period of time with the intention of acquiring higher qualifications and remaining relevant at their place of work. Mulwa (2018) concludes that indiscipline among the pupils influenced poor performance. This is not different from skill acquisition in vocational and training centres.

Monari (2019) concurs by citing Olembo (2017) who notes that indiscipline is a bad crutch but a very good walking stick. Olembo notes that indiscipline has been cited as the sole explanation to the mass failure of students in skill acquisition. He found that 71.4% of Kenyan schools and vocational centres have experienced indiscipline problems and due to this 50.0% have not been able to graduate as properly skilled students in vocational subjects. Omulando (2018) says that children's performance in languages in schools is influenced by the education of siblings among other factors. This is to say that educated older siblings usually help their younger brothers and sisters with their academic work, hence playing even a more important role as educational models. Mugambi (2019) notes that the entry marks of students to higher school learning institutions and training centers greatly influence performance and skill acquisition at the end of learning.

2.1.6 Societal Related Factor Inhibiting Acquisition of Building Technology Skill

The involvement of the society in the process of learning provides an environment that develops learners' intellectual and creative talents. The nature of the society involvement whether economically or socially is influenced by the nature of interactions a child has with his/her parents at home. When parents get involved in academic affairs of their children, academic performance improves. Societal influence is more profound than that of school, (Finn 2019). Bloom (2020) asserts that societal encouragement helps a student to succeed by increasing one's confidence, development of positive attitudes towards education will affect their involvement and their children's views of education.

Acana (2021) found out that societal encouragement among other factors was significantly related to the child's academic performance. Kapila (2019) also reported

positive association between societal participation in the child's work and academic performance. He further explains that when the society is involved in the children's education, the child goes to a good schools and the schools where the children go to perform better. He further stated that involvement of the society helps send a message to the students that the school is more important and the society expects the child to take school more seriously. In conclusion, he says that the home environment that encourages learning is more important to students than income, level of education of parents and the cultural background.

Parents ought to discuss school issues with their children to be aware of what is happening in school. Williams (2021) stated that when children and parents talk regularly about school, children perform better academically. When parents were involved in school affairs children stayed for longer period in school and dropout rates are low. Finn (2019) stated that involvement in school included participation in helping with homework, discussing school matters and actively organizing and monitoring a child's school activities. The involvement should start early to enhance good performance. The earlier the involvement begins in a child's education process, the more powerful effects it has on him. Orodho (2019) asserts that the school should encourage parents to take an active role in educational pursuit of their children. He further added that parents should prioritize the meagre resources to purchase instructional resources such as textbooks for their children. Acana (2021) explains that home environment may enhance positive self- esteem by providing warmth respectful treatment and clearly define limits.

Mulwa (2018) stated that the parents who were disconcerted tended to train their sons from the earliest years of grammar to take school seriously and use education as the

means of climbing into the middle class. This means that the way a parent views education and verbally encourages his child can encourage the child to perform well. This would mean that levels of occupation of parents are not the only determinants of good academic performance. Unfavourable homes or the maladjusted homes will manifest frequent parental quarrels, insecurity, child abuse and divorce among other forms of maladjustment. If the child comes from a favourable and encouraging home environment, then such child will perform well. However, there are certain contradictions worth noting. This is where a child from an enabling home environment may not be doing well in school.

In the United Kingdom (UK), research conducted by Richardson (2021) analyzed the views of 262 head teachers on the subject of the parent teacher cooperation and 66% of the response rate attained in which 85% reacted positively towards societal involvement. The main benefit of this study showed that leading society took greater interest in the schools and so they helped teachers understand the child and were encouraging the child in his/her lessons. Sena (2021) agrees that there is accumulated evidence that societal encouragement is of more profound significance than intelligence quotient, social economic status or other school variables. Williams Report of 2021 strongly recommended the involvement of the society in the governance of school. Teachers ought to allow the presence of parents in classroom. This can be beneficial in that it may enhance the status of the teacher.

Mulwa (2018) explains that there was a need for societal involvement in the assessment and diagnosis of the child's skills, abilities and teaching requirements. Parents should have access to school records. FGN report of 2017 on societal involvement scheme attached to pre kindergarten program incorporated school visits, group meetings, home

visits and auxiliary contacts e.g. telephone communication with parents. The result showed that societal involvement had a positive impact. This situation is likely to apply to skill acquisition among the learners in vocational centres. It was also noted that the results were or had positive effect on all the three measure which was independent of the child's age, mother's educational background or family financial status. The extent of societal interest and involvement in school activities positively relates to pupils' achievements. Parents who are involved in decision making and are able to relate to teachers will experience greater satisfaction with school. Mayben (2020) reviews evidence on academic achievement of different kinds of societal involvement in instruction has been shown to improve pupil achievement while involvement in school enhances self-esteem.

2.1.7 Strategies for Improving the Acquisition of Building Technology Skill in Technical Colleges

Skill acquisition according to Aliozor (2017) is the process by which individuals are expected to learn and continuous practice in particular task till the learner becomes proficient in the operation and can perform them when required. Okorie (2018) said that skills are acquired when procedural instructions are matched with performance activities. For skills to be acquired, there must be opportunities for participation and practice of such skills under real life situation. Skill acquisition is very necessary at this stage of Nigeria's economic and technological development. Olaitan (2020) said that the acquisition of skills prepares students for vocational occupation and progressive development in it. Skill acquisition remains the major goal of vocational technical education and this helps to satisfy the personal work needs of both the individual and

the society (Aliozor, 2017). To acquire skills in vocational technical education courses such as building technology at technical college level, opportunities must be provided for students to practice the skills they are taught in an environment that is relevant to the job skills learnt. Such opportunities that should be provided that may improve skill acquisition of building technology students include field trip/excursion, allocation of more time for practical work, production unit, provision of materials to practice with.

The concept of production unit in technical colleges is a situation whereby a department organizes her students with the permission of the school authority to undertake some direct – labour jobs in the school. At times the unit may canvas for jobs outside school. A well-organized production unit does not only expose the students to skill acquisition processes but also generates fund for the school. Production unit activities should be carried out under close supervision of the teacher. For proper skill acquisition in Building Technology, appropriate teaching strategies must be applied by teachers for teaching both the theory and practical aspect of building technology. Teachers also need relevant building tools and equipment for imparting skills to students under their control. A teacher in the opinion of Hornby (2019) is a person who gives instruction to a learner, i.e, a person who communicates knowledge, skills and attitudes to someone in a school. In the context of this study, a teacher of Building Technology is one who gives instructions, communicates knowledge, skills and attitudes in building technology to students. Two categories of teachers of building technology could be found in technical colleges. That is qualified and unqualified teachers. A qualified teacher of building technology is an individual who has teaching qualifications such as Nigerian Certificate in Education (NCE) technical, Bachelor of Education (B.Ed) or Masters of Education (M.Ed) as stated in National Policy on Education (2018) and has been in employment of teaching building technology to students. But unqualified

teacher of building technology is a person who has been teaching building technology to students in technical college with qualifications such as ordinary National Diploma (OND) or Higher National Diploma (HND).

Building technology is one of the vocational programmes offered in technical colleges. It is designed to produce building technicians for the construction/building industry. In building technology according to Okparaeke (2017), students are expected to work with materials, tools, equipment and machines to mould blocks, carry out preliminary site operations, concreting, block wall construction and finishing in the building industry. In building technology according to Odu (2021) students learn building construction, brick/block laying, technical drawing, building drawing, construction management, surveying and quantity surveying. The curriculum for building technology by the National Board for Technical Education (NBTE) is made up of 60 percent theory and 40 percent practical. The aim of this initiative is to increase the technological growth of the country and to allow students to acquire more technical skills. In spite of Federal Government's emphasis on improving technology, building technology students still find it difficult to acquire building skills that can make them functional in the society after graduation. Students of building technology graduate with little or no building skills at all to enable them work in building industries or firms or to be self-employed. These graduates need necessary building skills in order to take up job in building industries that are now springing up here and there Okoro (2019). Skills are needed to service the sophisticated technical equipment that are now being imported into the country Aliozor (2017). Acquisition of saleable skills is the answer to the unemployment among the youths. Erewani (2016) explained that the level of unemployment in a state is indicative of the quality and quantity of manpower available. Nzeagu (2019) also said that the main cause of unemployment among school leavers is

lack of training and skills. In order to reduce unemployment among building technology students after graduation and for them to contribute their quota to the development of the state, building skills need to be taught by technical teachers, modern building technology tools and equipment for teaching relevant skills in building must be readily available, also good teaching strategies must be used to teach building skills to the students and correct evaluation strategies are to be applied to evaluate students' performance both with and outside school.

Without acquiring building skills, graduates of building technology can never be functional in the society. Building skills are teachable skills. They can only be acquired when relevant materials, tools and equipment are available for teaching. Relevant tools and equipment enhance practical teaching and learning process. Quality of instructions offered to the students depends on the teaching strategies employed. The process of offering quality instructions to students involves the use of sophisticated tools, equipment and machines, delicate materials and complex methods of work. This now demands for skilled graduates to be involved in building technology practices in the state. Hence, it is imperative to determine strategies for improving skill acquisition of building technology students in technical colleges that will enable them to function effectively in Niger State.

Teaching strategies of Building Technology theory to improve skill acquisition of Building Technology students in technical colleges, teaching practical strategies of Building Technology that will enhance skill acquisition of Building Technology students and Evaluation strategies to improve skill acquisition of Building Technology students in technical colleges are also other ways of improving acquisition of building technology skills in technical colleges.

2.2 Theoretical Framework of the Study

Theories are postulates requiring further explanations in order to make meaning. According to Jamabo (2018), theories can be described as a set of concepts, principles, propositions and generalizations that are logically interconnected which present a systematic view of phenomena that enable the user to describe, explain, predict or advance knowledge. Theories are thus the foundation of any research (Ali, 2020). In other words, theories are principles on which a subject of study is based. When a theory is applied in teaching and learning, it provides the principles, which directly governs it (Nwachukwu, 2018). Continuing, Nwachukwu stated that for a theory to be useful, it should play two important roles such as:

1. It should serve as a process of systematizing information in an area of knowledge thereby leading to the discovery of unknown facts; and
2. It should summarize information in such a manner that is easily used to explain a given concept.

Therefore, the theoretical foundations upon which this study is based are Dreyfus model of skill acquisition, Dynamic skill theory.

2.2.1 Theory of Skill Acquisition

According to Hornby (2019), skill acquisition is a specific form of learning. it will be sufficient to define learning as the representation of information in memory concerning some environmental or cognitive event. Thus, learning refers to an organism storing something about its past in memory. Skill acquisition refers to a form of prolonged learning about a family of events. Through many pairings of similar stimuli with

particular responses, a person can begin to develop knowledge representations of how to respond in certain situations. These representations have some form of privileged status in memory because they can be retrieved more easily and reliably than memories of single events. Thus, skilled behaviors can become routinized and even automatic under some conditions. Dekeyser's skill-learning theory (2019) states that in order to develop true fluency in an L2 proficiency, learners must have opportunities to create pragmatic meaning. Accordingly, implicit knowledge arises out of explicit knowledge, when the latter is proceduralized through practice (Ellis, 2019).

According to Dekeyser (2019) The basic claim of skill acquisition theory is that the learning of a wide variety of skills shows a remarkable similarity in development from initial representation of knowledge through initial changes in behavior to eventual fluent, Spontaneous, largely effortless, and highly skilled behavior, and that this set of phenomena came unaccounted for by a set of basic principles common to the acquisition of all skills. The scientific roots of Skill Acquisition Theory can be found in different branches of psychology, which ranges from behaviorism to cognitivism and connectionism (Fisher, 2020). This theory draws on Anderson's Adaptive control of Thought (ACT) model which itself is a kind of cognitive stimulus-response theory.

2.2.2 Dreyfus Model of Skill Acquisition

[Hubert Dreyfus](#) (2018) propounded the "Dreyfus model of skill acquisition" which states that formal system of education is a gradual process that involves being embodied in different ways and developing skills that would make it possible for people to deal with the world. The main idea behind the Dreyfus's model of skill acquisition is the distinction they make between "knowing that" and "knowing how". The two concepts are considered as one concept, which is acquired through a formal system of education.

According to [Hubert Dreyfus](#) (2018), learners acquire skills through instruction and experiences, they do not appear to leap suddenly from rule-guided “knowing that” to experienced based knowing-how. The Dreyfus model of skill acquisition is a model of how students acquire [skills](#) through formal instruction and practicing. They believe that there is a gradual process involved for a learner to go through in order to reach the stage of expertise or knowing-how.

The original model proposes that a student passes through five distinct stages: novice, competence, proficiency, expertise, and mastery. However, these stages of skill acquisition relate to this study in the following ways:

Novice Stage: At this first stage, a person follows rules as given, without context, with no sense of responsibility beyond following the rules exactly. In the process of learning the rules, students upon graduation are already exposed to the basic knowledge and principles of skill acquisition in order to prepare him for emerging technology skills for the maintenance of modern vehicles.

Advanced Beginner: The learner at this stage recognizes new situations in which the rules may be applied. Student’s performance improves to a relatively acceptable level only after the novice has had enough experience in copying the real situation, the students starts to show unique performance through personal experience.

Competency Stage: Competence develops when the individual develops organizing principles to quickly access the particular rules that are relevant to the specific task at hand; hence, competence is characterized by active [decision making](#) in choosing a course of action. Student’s at this stage begins to get involved personally with the task.

They start seeing more than one option from which they have to choose the best one for optimal performance.

Proficiency Stage: Proficiency is shown by individuals who develop **intuition** to guide their decisions and devise their own rules to formulate plans. The progression is thus from rigid adherence to rules to an intuitive mode of reasoning based on **tacit knowledge**. This is the stage where the student while intuitively understanding his task, still thinks analytically about his actions. The student must have acquired basic skills that will enable him think creatively towards becoming self-employed after graduation. Hence, analyzing ways of raising capital, location of business and other business strategies becomes his priority.

Mastery Stage: Experts in general know what to do base on mature understanding of the task. An expert has had so much experience with the task that the skill of carrying out the task is part of him. He acts upon correct intuitions without analytically thinking about his every move. They also emphasize on the fact that practice is required for the agent to maintain the knowing-how. Without practice, the agent will gradually lose his expertise and s most likely to regress as far as the competence stage. This is the level to which the ability to create jobs which will in turn make a MVMW graduate self-employed becomes necessary.

2.3 Related Empirical Studies

Bakare (2016) conducted a research purpose of this study was to investigate technical teachers' perception of factions affecting practical skill acquisition among technical college graduates in Adamawa state, Nigeria. The study was guided by four research questions. The population for the study was 41 trade course technical teachers from

three technical colleges in the state. Whole population was used for the study. A structured questionnaire was used for data collection. The data for the study was analyzed using Mean and Standard Deviation. The findings were: technical teachers agreed that their schools lacked infrastructures such as workshops, classrooms, libraries, power supply and workshop tools and equipment for practical instructions. They also agreed that they can handle the practical aspect of their lessons effectively. The teachers were also not satisfied with their students' disposition to practical lessons in the various trades. It was recommended that government should take a bold step towards providing classrooms, libraries and functional workshops with standby generators for all the trades in the technical colleges. The government should come up with a development of teacher trainer programme whereby teachers of technical vocational education can be trained more in their specific skill areas practically.

Ngozi (2016) conducted a study which surveyed the hindrances to skill acquisition in technical college Motor Vehicle Mechanics Work (MVMW) program in Niger State, Nigeria. Data were collected using a validated 21 item 5-point rating scale questionnaire (with a Cronbach Alpha reliability of 0.89) on a sample of 42 MVMW teachers and 355 MVMW students from all seven technical colleges situated in the state. Mean and standard deviation were used to answer the research questions while z-test statistics was used to test the null hypotheses at 0.05 level of significance. The hindrances to skill acquisition were broken into teacher related and student related factors. The study revealed among others that: the MVMW teachers lack adequate training facilities to teach required practical skills while the MVMW students are faced with acquiring obsolete skills that cannot enhance industrial development. The study recommends among others, the National Board for Technical Education and all stakeholders provide adequate practical skill acquisition facilities and periodically organize practical training

in the work skills required by automobile industry to enhance industrial development in Nigeria.

The similarities between this study and the present focuses on the Teacher related Factors inhibiting acquisition of trade skills among students. Hindrances to skill acquisition in technical college in Niger State, Nigeria. while the present study Is carried out in Minna, Niger state

Okparaeke (2017) conducted a study on the strategies for improving skill acquisition of building technology students that will enable them to function effectively in Colleges of Education in Nigeria. The study adopted survey research design. The sample for the study comprised 10 students of Building Technology from College of Education, Ikere-Ekiti, Ekiti State, Nigeria. A questionnaire consisting of 25 items was developed and used for data collection. The questionnaire was subjected to the instrumentality of validity and reliability of good research instrument by the experts. Each of the items of the instrument scrutinized for clarity of statements. They were also requested to examine the appropriateness and suitability of all items of the questionnaire. Their suggestions and corrections were used in modifying the instrument. Cronbach alpha method was used to estimate the reliability coefficient of the instrument. A total of 10 copies of the questionnaire were administered on the respondents by the researcher and with the aid of three trained research assistants. The completed questionnaires were collected after an interval of two weeks. The data collected were analyzed using mean for answering the five research questions while t-test was hypotheses at 0.05 level of significance.

The similarities between this study and the present focuses on the collection of questionnaire by the researcher. the study is carried out in Ekiti, while the recent study Is carried out in Minna, Niger state

Nwachukwu (2018) conducted a study which examined the effect of Ergonomic principles on students' acquisition of psycho-productive skills in Building Construction Trade in Technical Colleges using non-equivalent control group quasi experimental research design. The sample for the study comprised of 80 (60 males and 20 females) randomly selected from the six technical colleges in Edo State, Nigeria. The instruments for data collection were Psycho productive Skills Performance Test (PSPT) in Building Construction operations, Building Construction Interest Inventory (BCII) and lesson plans. Three experts validated the instrument. The reliability of the instrument was determined using Kuder Richardson 21 (KR-21) formulae and a reliability coefficient of .89 was obtained. Mean and standard deviation were used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the hypotheses at .05 level of significance. Findings from the study revealed among others that Ergonomic principles were effective in enhancing technical college students' acquisition of psycho-productive skills in Building Construction Trade. Based on the findings of this study, it was recommended among others that Ergonomics principles should be incorporated as an instructional technique into the technical college Building Construction Trade curriculum for effective instructional process.

Amimo (2019) conducted a study which assessed learning influence factors on building technology in colleges of education in Nigeria. Two research questions were raised to guide the study and two hypotheses were formulated and tested at .5 level of significant. The research design used for this study was the descriptive survey research design. The study was carried out in Nigeria. The population of the study consisted of all the 246 building technology lecturers in colleges of education in Nigeria. The sample for the study consisted of 73 building technology lecturers, 31 from federal colleges of education and 42 from State colleges of education. Stratified random technique was

used to select one each federal and State colleges of education from the six geopolitical zones in Nigeria to represent the population. The instrument for data collection was a structured questionnaire. The instrument was content validated by three building technology experts, two from Federal University of Technology, Minna and one from Niger State college of education, Minna. Cronbach Alpha statistical technique was used to determine the reliability of the instrument and yielded .88 and .89 coefficients. The study employed the use of mean to answer the research questions and Z-test to test the null hypotheses. Findings revealed among others that, intelligence, learning style, students' needs, interest, aptitude, attitude, motivation, mental health, inspiration to achieve learning and emotional condition of students were found to be learning influence factors associated to students on building technology in colleges of education in Nigeria. The study recommended that, lecturers should give attention to the identified learning influence factors associated to students and environment in order to promote learning of building technology in colleges of education in Nigeria.

The similarities between this study and the present study are both based on the factors associated with learning among building technology students in in college of education, the recent study is carried out in Minna, Niger state while the present study Is carried out in Minna, Niger state

Okoro (2019) carried out a research on the strategies for enhancing the enhancing skill acquisition among business studies students in secondary school in Delta State. Two research questions guided the study and two null hypotheses were tested. The descriptive survey research design was adopted for the study. The population of the study comprised 914 business studies teachers from the 466 public secondary schools in Delta State. Through simple random sampling technique, the researcher sampled

30% of the total population of the study. This amounted to 276 business studies teachers. A researcher developed structured questionnaire was used for data collection. The instrument was validated by three experts in business education. The Cronbach Alpha technique was used to test the reliability which yielded a co-efficient value of 0.80 and 0.84 for section B1 and B2 respectively with an overall reliability coefficient of 0.82. Data was analyzed using mean, standard deviation and t-test. The mean value was used to provide answers to the research question while standard deviation was used to determine the harmony in opinions of the respondents. The test was used to test the null hypotheses at 0.05 level of significance. Finding on revealed that business studies teachers agree that teacher's inability to use appropriate teaching strategies, non-coverage of the curriculum content of business studies, lack of physical facilities like computer laboratories and workshops for practical training and lack of instructional facilities for exposing students to real life situations were some of the challenges militating against skills acquisition among business studies students in secondary schools in Delta State. Findings also revealed that the respondents agreed that organizing professional training programs for business studies teachers on techniques for practical skills training, making available state of the art instructional materials for teaching of business studies students, encouraging school industry partnership in the curriculum planning, implementation and teaching of business studies students and encouraging school industry partnership in the funding of business studies, among others are strategies for enhancing acquisition of business skills among secondary school students in Delta State. The gender of the respondents did not significantly affect their opinion. Based on these findings it was recommended that business studies teachers should improve on their abilities for teaching practical business skills by attending workshops, seminars and conferences.

The similarities between this study and the present focuses on the Teacher related Factors inhibiting acquisition of trade skills among students. The study is carried out in Delta state while the present study is carried out in Minna, Niger state.

Uwaifor (2019) conducted a research which purpose is to establish the factors affecting acquisition of vocational skills among the youth learners in Maranda Division, Siaya county. The study established how attitudes of learners affected skill acquisition. It examined the adequacy of the learning resources used at the centres. The research was conducted using a descriptive survey design. This design involved asking a large group questions about a particular issue. Information was obtained from a sample rather than the entire population. Questionnaires were used to gather information on demographic details of the respondents. The effects of indiscipline on skill acquisition and teacher bum out rate was also established. Simple random sampling method was used to get the sample size needed in the study. The sample size used consisted of 79 respondents. The questionnaire return rate was 77.33%. This proportion was more than a third of the target population. Thus, allowing for conclusions on the whole population to be drawn. The study found out that learners' poor attitudes towards vocational education affected skill acquisition. Physical facilities and learning resources were also found to be inadequate. It was recommended that the instructors' terms and conditions of work should be improved to reduce teacher bum out rate. A similar study in other parts of the country could help establish the actual state of vocational education in the country. Finally, a comparative study of the youth polytechnics and the non-formal adult literacy should be carried out.

The similarities between this study and the present focuses on The study on how attitudes of learners affected skill acquisition. And was carried out in Maranda

Division, Siaya county. Kenya while the present study is in Minna, Niger state, and the study focused on the factors affecting acquisition of vocational skills among the youth.

Akpan (2019) carried out a research on technical education, as enshrined in the Nigerian national policy on education, is concerned with qualitative technological human resources development directed towards a national pool of skilled and self-reliant craftsmen, technicians and technologists in technical and vocational education fields. In Nigeria, the training of technical personnel has witnessed many challenges ranging from policies which have no bearing with our problems, curriculum that has little or no relationship with workplace and social needs, embezzlement of fund meant for education development purposes, lack of teacher motivation, inadequate facilities, inadequate funding, brain drain, poor staff training, bribery and corruption. This paper intends to critically examine some of the issues, challenges and way forward of technical, vocational education and training(TVET) in Nigeria and to suggest ways of improving the teaching and learning of technical and vocational education with greater interest and enthusiasm.

Odu (2021) conducted a study designed to identify task and procedures necessary for assessing practical work in Buck/Block laying and concreting in Technical colleges in Niger state. Two research questions were formulated to guide the study. Two null hypotheses were formulated and tested at the probability of 0.005 level of significance. Twenty-Nine structured questionnaire items were developed and used for the study while three experts were engaged to face-validate the instrument. The instrument was pilot tested on 15 students and reliability coefficient of the entire instrument was 0.87. Descriptive Survey Research Design was used for the study, the respondents for the study were 69 made up of 49 building Technology Teachers, and 20 Registered

Builders. The major findings of the study include among others that, some tasks have been identified appropriate for inclusion in the instrument for assessing practical work in Brick/Block laying and concreting in Technical colleges in Niger State. It was recommended that Brick/Block laying and concreting teachers should be acquainted with the developed instrument to enhance uniform standard in assessing student's practical work

2.4 Summary of Literature Review

The literature review for the study covers strategies for skill acquisition among students of Building Technology in technical colleges. Concept of skill acquisition and various technical skills in Building Technology were reviewed in the study. Relevant evaluation strategies that can be used by the technical teachers for evaluating practical or technical skills acquired by the students in Building Technology were also described. Among the strategies reviewed in the study include rating scale, checklist, ranking strategies and performance test and process and product evaluation strategies. Various works on Building Technology in Nigerian technical colleges were also reviewed. Skill theory was also explained and shown how it related to the study.

The review also showed that the failure of psycho-productive skill acquisition in technical colleges in Nigeria is mostly blamed on technology teacher's programmes. The technology teachers produced today from various institutions seem not to be prepared for teaching technology courses. The present trend tends to suggest that there is lack of saleable skills acquired by students at the end of their course that can enable them relate what they have learnt to the real world, hence technology teacher programme tend to be more subjective and theoretical in approach than desired. This chapter reviewed the related literature in the field of study and showed that attitude

greatly impacts learning and acquisition of skills no matter whether the training is in a technical or nontechnical schooling environment. Factors that inhibits the attitude of a learner were discussed and their implications to the study elaborated. There is well of literature from studies in the relationship between attitude and skills acquisition and this chapter dived to the deeper side by providing most of these studies. The conceptual framework based on the theories discussed in this chapter is presented in Figure 2.1 and the subsequent explanation of each factor provided. This chapter presented a critic of some of the studies reviewed and offered the gap it is filling. The review has shown that a lot of research has been done on issues that disrupt effective acquisition of building trade skills among technical college students. Citing possible reasons why there are problems of acquisition. However, no such work has been in Minna, particularly in Niger state.

The need to find innovative instructional strategies that could assist students of Building Construction trade in learning practical activities stimulate their interest and promote their psycho-productive skill acquisition is paramount as productive skill acquisition is fundamental in all occupational areas of vocational education.

CHAPTER THREE

3.0

RESEARCH METHODOLOGY

This chapter describes Research design, Area of study, population of the study, Instrument for data collection, Validation of the instrument, Administration of the instrument, Method of data analysis and Decision rules respectively.

3.1 Research Design

The descriptive survey research method with the use of a structured questionnaire was used to collect the required information from the respondents. The survey research was adopted because survey design generally can be used to effectively investigate problems in realistic settings. Nwachukwu (2018) described survey research as that which a group of people or items is studied by collecting and analysing data from only a few people or items considered to be representative of the entire group.

3.2 Area of the study

This study will be carried out in Niger State, a state in central Nigeria and the largest state in the country which shares boundaries with Kaduna State (North-East), Federal Capital Territory (South-East), Kebbi State (North-West), and Kwara State (South-West).

This study covers five government technical colleges in Niger State. The following are the technical colleges: Federal Science and Technical College, Shiroro, Government Technical College, Eyagi Bida, Government Technical College, Kontagora, Government Technical College, Minna, Government Technical College, New Bussa

3.3 Population of the Study

The targeted population for this study comprises of 25 building technology teachers in five technical colleges offering building Technology trade in Niger State and 75

building technology students in five technical colleges in Niger State making it the total of 100. There was no need of sampling since all the population in their schools were used

3.4 Sample Size and Sampling Techniques

This technique selected a sample without bias from sample size. Items were picked at random from a list container or table of random numbers. The technique was used in the study because it ensured that each member of the sample size had an equal and independent chance of being included in the sample. In this study a total of five technical colleges out of seven in the division were randomly sampled and used. Ali (2020) suggests that if a population consists of a sub population, then stratified random sampling should be used to ensure that none of the sub population has been omitted from the sample. This study therefore used stratified random sampling.

3.5 Instrument for data Collection

The instrument used for data collection is questionnaire. The questionnaire is to determine the opinion of the respondents that comprises of motor vehicle mechanic teachers and automobile technology lecturers in Niger State. The questionnaire is divided into two parts (i and ii). Part i consist of respondents "personal data", containing information about gender, age, categories, qualification and part ii is grouped into (A,B,C,D and E) where question A consist of 10 items which sought to elicit information on the teacher's related factors inhibiting acquisition of building technology skills among technical college students in Niger State, sub-section B consist of 10 items which sought to elicit information on the student's related factor inhibiting acquisition of building technology skills among technical college students in Niger

State, sub-section C consist of 10 items which sought to elicit information on the societal related factors inhibiting acquisition of building technology skills among technical college students in Niger State and sub-section D consist of 10 items which sought to elicit information on the strategies for improving the acquisition of building technology skills among technical college students in Niger State.

3.6 Validation of the Instrument

The instrument for the data collection was designed by the researcher and was validated by three lecturers in the Department of Industrial and Technology Education (I.T.E), The validators were requested to check the suitability and clarity of the item who found it appropriate for the study before administering.

3.7 Administration of the Instrument

The instrument use for data collection will be administered to the respondent by the researcher and a researcher assistant within the study area selected for this research.

3.8 Method of Data Analysis

The data collected by the researcher was analyzed using mean, standard deviation and t-test as statistical tools. A four-point rating scale was employed with the following response.

Alternative value		Abbreviation	Rating
Strongly Agree	=	“SA”	4
Agree	=	“A”	3
Disagree	=	“D”	2

Strongly Disagree = "SD" 1

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

4 4

The mean response of each item was obtained by using the following formula

$$\bar{X}_1 = \frac{\sum FX}{N}$$

Where

£ = Summation of

X = normal value of option (mean)

N = number of response of an item

F = frequency of response of each option

\bar{X}_2 = Grand mean of each item

3.9 Decision Rule

To determine the level of acceptance, mean response. 2.50 And above was considered agreed or accepted. While mean response of 2.49 and below was equally considered disagreed or rejected. For testing hypothesis ± 1.68 will be the critical value, any item that has its t- value equal or less than t- critical was considered not significant, and any item that has its calculated t- value above t-critical was considered significant.

CHAPTER FOUR

PRESENTATION AND DATA ANALYSIS

This chapter deals with the presentation and analysis of data with respect to the research questions formulated for this study, the result of this data analysis for the research questions are presented first, followed by those of the hypotheses tested for the study.

4.1 Research Question 1

What are the teacher's related factors inhibiting acquisition of building technology skills among technical college students in Niger State?

Table 4.1: mean response on the teachers related factor inhibiting acquisition of building technology skills among technical college students in Niger state. N1=75 N2=25.

S/N	ITEMS STATEMENT	X ₁	X ₂	X _t	Remark
1	Inadequate practical training given to building technology teachers affects the practical training of trainees.	3.3	2.8	3.1	Agreed
2	Lack of industrial attachment for upgrading building technology teachers' skills affects teaching of practical skills.	2.9	2.9	2.9	Agreed
3	Poor remuneration & lack of motivation Discourage building technology teachers from workshop practice.	3.8	3.0	3.4	Agreed
4	Inappropriate teaching methods affect practical skill acquisition.	3.2	3.8	3.5	Agreed
5	Inability to control large class size during practical skill training.	3.3	2.9	3.1	Agreed
6	Building technology teachers find it difficult to teach skills in the absence of adequate modern training facilities.	2.9	2.8	2.9	Agreed
7	Too much emphasis on theoretical aspect of building technology against practice during instructional delivery.	2.4	2.9	2.7	Agreed
8	Poor attitude of building technology teachers towards improvisation of training equipment.	3.1	2.9	3.0	Agreed
9	Poor professional, personal & public image accorded to building technology teachers in the society.	1.9	2.1	2.0	Disagreed

10	Absence of regular in-service program for continual advancement of building technology teachers' education.	2.7	2.5	2.6	Agreed
11	Economic status of building technology teachers in technical colleges	3.3	2.8	3.1	Agreed
12	Qualification of building technology teachers in technical colleges	3.8	3.0	3.4	Agreed
13	Building technology teachers comfortability with the courses they are teaching	3.2	3.8	3.5	Agreed
14	Teachers level of satisfaction with building technology courses taught in technical colleges.	3.3	2.9	3.1	Agreed
15	Physical facilities used to enhance learning of building technology skill	2.1	1.9	2.0	Disagreed

KEY:

X1= average mean responses of building technology students,

X2= average mean responses of building technology teachers,

N1= number of building technology students,

N2= number of building technology teachers.

Table 4.1.1 reviews that the respondents agreed with item 1,2,3,4,5,6,7,8,10,11,12,13 and 14 with a mean score above 2.50 respectively. While item 9 and 15 disagreed with a mean score below 2.50. this means that item 1,2,3,4,5,6,7,8,10,11,12,13 and 14 agreed to the teacher's related factors inhibiting acquisition of building technology skills among technical college students in Niger State. While item 9 and 15 disagreed.

4.2 Research Question 2

What are the student's related factor inhibiting acquisition of building technology skills among technical college students in Niger State?

Table 4.2: mean response on the student’s related factor inhibiting acquisition of building technology skills among technical college students in Niger State. N1=75 N2=25.

S/N	ITEM STATEMENT	X ₁	X ₂	X _t	Remark
1	Difficulty in securing industrial attachment in appropriate building industry.	3.3	2.9	3.1	Agreed
2	Negligence of building industries towards accepting building trade students for industrial attachment.	2.9	2.7	2.8	Agreed
3	High priority accorded to general education by the society over building technology programme demoralizes trainees.	2.6	2.8	2.7	Agreed
4	Haphazard sequence of practical training that comes only during national examination inhibits effective skill acquisition.	2.5	3.0	2.8	Agreed
5	Non-payment of stipend to students in training during industrial training demoralizes some student.	2.8	2.7	2.8	Agreed
6	Difficulty in purchasing information & communication technology devices needed for learning skills.	2.9	2.8	2.9	Agreed
7	Inconsistencies in the financial settlement scheme for building technology graduates willing to practice their trades.	1.8	2.0	1.9	Disagreed
8	The societal view that building technology program is for unintelligence & under achievers reduces students’ interest	3.1	2.8	3.0	Agreed
9	The availability of obsolete training facilities leads to acquisition of outdated skills that are irrelevant to industries.	2.9	2.7	2.8	Agreed
10	Students’ laziness & lack of focus on skill acquisition on a particular trade.	2.6	2.8	2.7	Agreed
11	Attitude of students towards acquiring building technology skill express by the teacher	2.5	3.0	2.8	Agreed
12	Attitude of students towards acquiring building technology skill offered to them.	2.8	2.7	2.8	Agreed
13	Adequacy of the learning resources used at technical colleges	2.9	2.8	2.9	Agreed
14	Physical facilities used to enhance the acquiring of building technology skill.	2.0	1.8	1.9	Disagreed
15	Courses offered in technical colleges	3.1	2.8	3.0	Agreed

KEY:

X₁= average mean responses of building technology students,

X₂= average mean responses of building technology teachers,

N₁= number of building technology students,

N₂= number of building technology teachers.

Table 4.1.2 shows that both respondents agreed on the problems associated with the management of motor vehicle mechanics workshop in technical colleges, item 1,2,3,4,5,6,8,9,10,11,12,13 and 15 as reflected by their own mean score greater than 2.50 respectively. Which item 7 and 14 disagreed with the mean score below 2.50.

4.3 Research Question 3

What are the strategies for improving the acquisition of building technology skills among technical college students in Niger State?

Table 4.3: mean response on the strategies for improving the acquisition of building technology skills among technical college students in Niger State. N1=75 N2=25.

S/N	ITEM STATEMENT	X ₁	X ₂	X _t	Remark
1	Organizing professional training programs for building technology teachers on techniques for practical skills training	3.8	3.5	3.7	Agreed
2	Making available state of the art instructional materials for teaching of building technology students	3.8	3.5	3.7	Agreed
3	Encouraging school industry partnership in the curriculum planning, implementation and teaching of building technology students	3.6	3.4	3.5	Agreed
4	Encouraging school industry partnership in the funding of building technology	4.0	3.7	3.9	Agreed
5	Providing more physical facilities like computer laboratories and practical workshops for building trade	3.2	3.3	3.3	Agreed
6	Recruiting qualified building technology teachers who possess the theoretical and practical knowledge of building trade	3.6	3.1	3.4	Agreed
7	Increasing the time allotted for the teaching of building technology courses	3.5	3.6	3.6	Agreed
8	Exposing students to practical skills learning experiences like field trips, on the job training, apprenticeship training among others	3.5	3.0	3.3	Agreed
9	Appropriately motivating building technology teachers by paying them their salaries in due time.	3.5	3.0	3.3	Agreed

10	Integrating information and communication technology in the teaching of building technology courses.	3.4	2.8	3.1	Agreed
11	Adequate in-service program provided for continual advancement of building technology teachers' education.	3.8	3.5	3.7	Agreed
12	Adequate electric power supply should be made available to power training tools & machines.	3.8	3.5	3.7	Agreed
13	select appropriate teaching methods to meet specific learning objectives rather than on their own convenience	3.6	3.4	3.5	Agreed
14	Teachers of building technology should study books to integrate their knowledge to the modern They have enough knowledge of subject matter in other fields of learning to integrate with related areas.	4.0	3.7	3.9	Agreed
15	Changing of building technology class procedure to maintain their students attention, interest and to attempt to reach students varying learning styles.	3.2	3.3	3.3	Agreed

KEY:

X1= average mean responses of building technology students,

X2= average mean responses of building technology teachers,

N1= number of building technology students,

N2= number of building technology teachers.

Table 4.3 shows that both respondents agreed on the strategies for improving the acquisition of building technology skills among technical college students in Niger State, item 1,2,3,4,5,6,7,8,9,10,11,12,13,14 and 15 as reflected by their own mean score greater than 2.50 respectively. Which none disagreed.

4.2 Testing of Hypotheses

4.4 Hypotheses 1:

There will be no significant difference in the mean response of building technology teachers and students on the teacher's related factors inhibiting acquisition of building technology skills among technical college students in Niger State.

Table 4.4: t-test analysis of the respondents of automobile technology teachers and automobile workshop supervisor on the industrial safety skills needed by MVM students in handling tools and equipment in automobile maintenance operation in Niger State.

S/N	ITEMS STATEMENT	SD ₁	SD ₂	t-test	Remark
1	Inadequate practical training given to building technology teachers affects the practical training of trainees.	0.46	0.99	3.41	NA
2	Lack of industrial attachment for upgrading building technology teachers' skills affects teaching of practical skills.	0.64	0.84	0.00	A
3	Poor remuneration & lack of motivation Discourage building technology teachers from workshop practice.	0.43	0.48	7.82	NA
4	Inappropriate teaching methods affect practical skill acquisition.	0.38	0.42	-6.66	NA
5	Inability to control large class size during practical skill training.	0.78	1.02	2.05	NA
6	Building technology teachers find it difficult to teach skills in the absence of adequate modern training facilities.	0.86	0.87	0.50	A
7	Too much emphasis on theoretical aspect of building technology against practice during instructional delivery.	1.04	0.98	-2.11	NA
8	Poor attitude of building technology teachers towards improvisation of training equipment.	1.00	1.07	0.85	A
9	Poor professional, personal & public image accorded to building technology teachers in the society.	0.99	1.12	-0.85	A
10	Absence of regular in-service program for continual advancement of building technology teachers' education.	0.98	0.91	0.90	A
11	Economic status of building technology teachers in technical colleges	0.46	0.99	3.41	NA
12	Qualification of building technology teachers in technical colleges	0.64	0.84	0.50	A
13	Building technology teachers comfortability with the courses they are teaching	0.43	0.48	7.82	NA

14	Teachers level of satisfaction with building technology courses taught in technical colleges.	0.38	0.42	-6.66	NA
15	Physical facilities used to enhance learning of building technology skill	0.78	1.02	2.05	NA

table 4.2.1: presents test of this hypotheses

Key

SD1= Standard deviation of building technology students

SD2= Standard deviation of building technology teachers

A= Accepted

NA= Not Accepted

The result shown in table 4.2.1 above indicates the Comparison between the teachers and students of building technology. Data revealed that items 2, 6, 8, 9,10 and 12 has a calculated t-value less than the t-critical value of ± 1.68 , hence hypothesis for these items were upheld at 0.05 level of significance. Except for item 1, 3, 4, 5,7,11,13,14 and 15 which has a t-calculated value above the t-critical value ± 1.68 , thus H_0 was not accepted for this items.

4.5 Hypothesis 2

There will be no significant difference in the mean response of building technology teachers and students on the student’s related factors inhibiting acquisition of building technology skills among technical college students in Niger State.

Table 4.5: t-test analysis of the respondents of automobile technology teachers and automobile workshop supervisor on the student's related factors inhibiting acquisition of building technology skills among technical college students in Niger State.

S/N	ITEM STATEMENT	SD ₁	SD ₂	t- test	Remark
1	Difficulty in securing industrial attachment in appropriate building industry.	0.74	0.96	2.16	NA
2	Negligence of building industries towards accepting building trade students for industrial attachment.	0.93	0.94	0.93	A
3	High priority accorded to general education by the society over building technology programme demoralizes trainees.	0.91	1.04	-0.92	A
4	Haphazard sequence of practical training that comes only during national examination inhibits effective skill acquisition.	1.08	1.01	-2.04	NA
5	Non-payment of stipend to students in training during industrial training demoralizes some student.	1.13	0.86	0.41	A
6	Difficulty in purchasing information & communication technology devices needed for learning skills.	1.01	0.92	0.44	A
7	Inconsistencies in the financial settlement scheme for building technology graduates willing to practice their trades.	0.94	1.02	-0.90	A
8	The societal view that building technology program is for unintelligence & under achievers reduces students' interest	0.91	1.10	1.35	A
9	The availability of obsolete training facilities leads to acquisition of outdated skills that are irrelevant to industries.	0.74	0.96	2.16	NA
10	Students' laziness & lack of focus on skill acquisition on a particular trade.	0.93	0.94	0.93	A
11	Attitude of students towards acquiring building technology skill express by the teacher	0.91	1.04	-0.92	A
12	Attitude of students towards acquiring building technology skill offered to them.	1.08	1.01	-2.04	NA
13	Adequacy of the learning resources used at technical colleges	1.13	0.86	0.41	A
14	Physical facilities used to enhance the acquiring of building technology skill.	1.01	0.92	0.44	A
15	Courses offered in technical colleges	0.94	1.02	-0.90	A

table 4.5: presents test of this hypotheses

Key

SD1= Standard deviation of building technology students
SD2= Standard deviation of building technology teachers
A= Accepted
NA= Not Accepted

The result shown in table 4.5 above indicates the Comparison between the teachers and students of building technology. Data revealed that items 2,3,5,6,7,8,10,11,13,14 and 15 has a calculated t-value less than the t-critical value of ± 1.68 , hence hypothesis for these items were upheld at 0.05 level of significance. Except for item 1,4,9 and 12 which has a t-calculated value above the t-critical value ± 1.68 , thus H_0 was not accepted for this items.

4.6 Hypothesis 3

There will be no significant difference in the mean response of building technology teacher and students on the strategies for improving the acquisition of building technology skills among technical college students in Niger State.

Table 4.6: t-test analysis of the respondents of automobile technology teachers and automobile workshop supervisor on the strategies for improving the acquisition of building technology skills among technical college students in Niger State.

S/N	ITEM STATEMENT	SD ₁	SD ₂	t-test	Remark
1	Organizing professional training programs for building technology teachers on techniques for practical skills training	0.44	0.50	2.88	NA
2	Making available state of the art instructional materials for teaching of building technology students	0.41	0.50	2.99	NA
3	Encouraging school industry partnership in the curriculum planning, implementation and teaching of building technology students	0.50	0.49	1.74	NA
4	Encouraging school industry partnership in the funding of building technology	0.00	0.46	5.65	NA
5	Providing more physical facilities like computer laboratories and practical workshops for building trade	0.44	0.44	-0.98	A
6	Recruiting qualified building technology teachers who possess the theoretical and practical knowledge of building trade	0.50	0.78	3.72	NA
7	Increasing the time allotted for the teaching of building technology courses	0.51	0.49	-0.86	A
8	Exposing students to practical skills learning experiences like field trips, on the job training, apprenticeship training among others	0.53	0.48	0.84	A
9	Appropriately motivating building technology teachers by paying them their salaries in due time.	0.51	0.77	3.70	NA
10	Integrating information and communication technology in the teaching of building technology courses.	0.51	1.01	3.87	NA
11	Adequate in-service program provided for continual advancement of building technology teachers' education.	0.44	0.50	2.88	NA
12	Adequate electric power supply should be made available to power training tools & machines.	0.41	0.50	2.99	NA
13	select appropriate teaching methods to meet specific learning objectives rather than on their own convenience	0.44	0.44	-0.98	A

14	Teachers of building technology should study books to integrate their knowledge to the modern They have enough knowledge of subject matter in other fields of learning to integrate with related areas.	0.51	0.49	-0.86	A
15	Changing of building technology class procedure to maintain their students attention, interest and to attempt to reach students varying learning styles.	0.53	0.48	0.84	A

table 4.6: presents test of this hypotheses

Key

SD1= Standard deviation of building technology students

SD2= Standard deviation of building technology teachers

A= Accepted

NA= Not Accepted

The result shown in table 4.6 above indicates the Comparism between the teachers and students of building technology. Data revealed that items 5,7,8,13,14 and 15 has a calculated t-value less than the t-critical value of ± 1.68 , hence hypothesis for these items were upheld at 0.05 level of significance. Except for item 1,2,3,4,6,9,10,11 and 12 which has a t-calculated value above the t-critical value ± 1.68 , thus HO was not accepted for this items.

4.3 Findings of the study

The following are the principle findings of the study, they are organized based on the research questions and hypothesis.

The findings related to the teacher's related factors inhibiting acquisition of building technology skills among technical college students in Niger State:

1. Lack of industrial attachment for upgrading building technology teachers' skills affects teaching of practical skills.

2. Building technology teachers find it difficult to teach skills in the absence of adequate modern training facilities.
3. Poor attitude of building technology teachers towards improvisation of training equipment.
4. Poor professional, personal & public image accorded to building technology teachers in the society.
5. Absence of regular in-service program for continual advancement of building technology teachers' education.
6. Qualification of building technology teachers in technical colleges

The findings related to the student's related factor inhibiting acquisition of building technology skills among technical college students in Niger State:

1. Negligence of building industries towards accepting building trade students for industrial attachment.
2. High priority accorded to general education by the society over building technology programme demoralizes trainees.
3. Non-payment of stipend to students in training during industrial training demoralizes some student.
4. Difficulty in purchasing information & communication technology devices needed for learning skills.
5. Inconsistencies in the financial settlement scheme for building technology graduates willing to practice their trades.
6. The societal view that building technology program is for unintelligence & under achievers reduces students' interest.
7. Students' laziness & lack of focus on skill acquisition on a particular trade.

8. Attitude of students towards acquiring building technology skill express by the teacher
9. Adequacy of the learning resources used at technical colleges.
10. Physical facilities used to enhance the acquiring of building technology skill.
11. Courses offered in technical colleges

The findings related to the strategies for improving the acquisition of building technology skills among technical college students in Niger State:

1. Providing more physical facilities like computer laboratories and practical workshops for building trade
2. Increasing the time allotted for the teaching of building technology courses
3. Exposing students to practical skills learning experiences like field trips, on the job training, apprenticeship training among others.
4. select appropriate teaching methods to meet specific learning objectives rather than on their own convenience
5. Teachers of building technology should study books to integrate their knowledge to the modern They have enough knowledge of subject matter in other fields of learning to integrate with related areas.
6. Changing of building technology class procedure to maintain their student's attention, interest and to attempt to reach students varying learning styles.

4.4 Discussion of the finding

The discussion of findings Are based on the research questions posed for the study and the hypothesis. The findings in table 4.1 related to research question 1 revealed that the respondents agreed with the majority of items on the teacher's related factors inhibiting acquisition of building technology skills among technical college students in Niger State. The findings revealed that Lack of industrial attachment for upgrading building

technology teachers' skills affects teaching of practical skills, building technology teachers find it difficult to teach skills in the absence of adequate modern training facilities, poor attitude of building technology teachers towards improvisation of training equipment, poor professional, personal & public image accorded to building technology teachers in the society, absence of regular in-service program for continual advancement of building technology teachers' education, qualification of building technology teachers in technical colleges are the teacher's related factor inhibiting the acquisition of building technology skills among technical college students. Ellis (2019) in a study on technical skills needs of technical college teachers found out that, no educational program can rise above the quality of its teachers and no teacher can teach a practical skill which he or she does not possess. Therefore, there is need to regularly update the

teacher training curriculum every three years and emphasize more practical content to cope with new innovations in building technology

The findings in table 4.2 related to research question 2 revealed that the respondents agreed the majority of items on the student's related factor inhibiting acquisition of building technology skills among technical college students in Niger State. The findings revealed that Negligence of building industries towards accepting building trade students for industrial attachment, high priority accorded to general education by the society over building technology programme demoralizes trainees, non-payment of stipend to students in training during industrial training demoralizes some student, difficulty in purchasing information & communication technology devices needed for learning skills, inconsistencies in the financial settlement scheme for building technology graduates willing to practice their trades are some of the students related factors inhibiting the acquisition of building technology skills among technical college

students in Niger state. In a study on Nigeria technical colleges found out that, the training provided by the technical colleges falls below modern training procedures. Furthermore, they stated that the training is devoid of formal orientation and lacks strict adherence to curriculum content for practical lessons. What is taught to trainees depends on the job or maintenance problem at hand.

The mode of training and instruction is mostly by observation, practice, trial and error method. Therefore, trainees upon graduation suffer unemployment, underemployment and find it difficult to adapt in modern industrial work environment where standardized training procedures are adopted (Ali, 2020).

The findings in table 4.3 related to research question 3 revealed that the respondents agreed with the majority of items on the strategies for improving the acquisition of building technology skills among technical college students in Niger state. The findings revealed that there is need for Organizing professional training programs for building technology teachers on techniques for practical skills training, encourage school industry partnership in the funding of building technology, the findings also revealed that providing more physical facilities like computer laboratories and practical workshop for building technology students would help improve the learning skills.

The implication of this findings revealed that when there are proper facilities for the training of building technology students in the workshop in various technical colleges, it will help to improve their learning skills.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals with summary, conclusion and recommendations based on the findings. Suggestions for further studies were also highlighted.

5.1 Summary of the Study

The research was conducted to investigate the factors inhibiting the acquisition of building trade skills among technical college students in Niger state. The chapter one of the study discussed a lot of issues concerning the factors inhibiting the acquisition of building technology trade in the background of the study, the statement of the problem was well stated which has to do with poor training among building technology personnel on the acquisition of building technology skill. The problem of being self-employed is being faced along the line in building technology trade. purpose of the study, significance of the study, the research questions and hypotheses were all formulated to guide the study.

The review of related literature looked at the historical background of technical college education system in Nigeria, building technology programme in technical education, skill acquisition in building technology, Teacher Related Factors Inhibiting Acquisition of Building Technology Skill, Student Related Factors Inhibiting Acquisition of Building Technology Skill, Societal Related Factors Inhibiting Acquisition of Building Technology Skill, Strategies for improving the acquisition of building technology skill in technical colleges are the sub-headings that were discussed, and different views concerning the topic which was harmonized in a comprehensive literature review.

The study used a survey design method and sought to investigate the factors inhibiting acquisition of building technology skills among technical college in Niger state. three

research questions were formulated based on the purpose of the study. A structured questionnaire was developed by the researcher. The instrument was in three sections and it was validated and used to get information from respondents. The population of the study was 100 building technologists, which are made up of 75 building technology students and 25 building technology teachers in Niger state. A total of 100 questionnaires were distributed with a 100% return rate. The data collected was analyzed using mean standard deviation and t-test. A mean response of 2.50 was used as a cut-off point, t-test however was employed to test the null hypotheses at 0.05 level of significance.

5.2 Implication of the study

The findings of the study as far as having implications on building technology trade in technical colleges in Niger state, building technology students, building technology teachers, building technology workshop supervisors. If the skills required by students and teaching and evaluation strategies identified by the study are incorporated into the curriculum of building technology. The teachers will be forced to write relevant materials such as textbooks and handouts in order for students to read and for other teachers. The identified skills and strategies will be incorporated into the curriculum of Building Technology by the curriculum planners and developers. In order to teach the identified skills effectively to students, adequate instructional materials must be supplied to schools by the government and employers of Building Technology Graduates. If the teaching and evaluation strategies identified by this study are used in teaching and evaluating students of Building Technology students while in Technical Colleges, it could assist them in acquiring skills for employment after graduation.

5.3 Contribution to Knowledge The proposed study on factors inhibiting the acquisition of building trade skills among technical college students in Niger State is significant because it will contribute to the existing knowledge on the challenges that students face in acquiring these skills. It will identify the factors that hinder the acquisition of building trade skills among technical college students, which is a critical area that has not been adequately explored in Niger State. This study will provide valuable insights that will be useful for policymakers, educators, and researchers interested in improving technical education in Nigeria.

The study will also contribute to the development of a skilled and competent workforce in the construction industry in Niger State. The findings of the study will identify the specific skills required for technical college students to succeed in the construction industry. The study will provide a comprehensive understanding of the teaching strategies, materials, and techniques required to facilitate skill acquisition. The study will be particularly beneficial for building technology teachers in technical colleges who will be able to identify their deficiencies and seek further training to acquire the required skills.

Furthermore, the study will contribute to reducing unemployment and social vices among youths in Niger State. By providing technical college students with saleable building technology skills, they will be better equipped to establish their own businesses or work in the construction industry, thereby creating job opportunities and reducing unemployment. This study's findings will also benefit communities by promoting the development of the building sector, thereby fostering economic growth and development in Niger State.

In summary, the proposed study's contribution to knowledge is significant in several ways. It will provide valuable insights into the factors inhibiting the acquisition of building trade skills among technical college students, identify the specific skills and materials required for teaching these skills, and promote the development of a skilled workforce in the construction industry in Niger State. The study's findings will be beneficial to policymakers, educators, researchers, and communities interested in improving technical education in Nigeria.

5.4 Conclusion

Based on the findings of the study, the following conclusions are drawn: Building Technology at Technical College level is all about teaching skills to students for employment and wealth creation after graduation. In order for students to acquire these skills, teachers are required to teach relevant skills to students by employing appropriate

teaching and evaluation strategies. The findings of this study also inform the government about its role in promoting quality skill acquisition in building technology trade by providing the necessary Funds to change the old machines and equipment. And also the need to further re-train building technology teachers for the need to have quality management skill and knowledge, so that the workshop can last longer.

5.5 Recommendations

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

1. The skills identified in this study should be integrated into the curriculum of Building Technology for training students in Technical Colleges.
2. Workshop and seminars should be organized for Building Technology teachers on current technologies/issues in Building Technology from time to time.
3. Teachers of Building Technology should endeavour to adopt identified teaching and evaluation strategies for training their students.
4. Training equipment, machines and books should be donated to schools offering Building Technology by government and employers of labour in order to teach skills to students.

5.6 Suggestions for Further Study

The following are suggested for further research:

1. Similar studies should be carried out in other states on strategies for improving skill acquisition of building technology students in technical colleges, polytechnics and university
2. A similar study should be conducted in other technical/vocational subjects such as technical drawing, woodwork, electricity/electronics, auto mechanics and building technology.
3. Competency improvement needs of teachers in teaching Building Technology to students in Technical Colleges in Niger states.

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APPENDIX

Department of Industrial and Technology Education,
School of Science and Technology Education,
Federal University of Technology Minna, Niger State.
Date.....

Dear Sir,

REQUEST FOR VALIDATION OF RESEARCH INSTRUMENT

I am an undergraduate of the Department of Industrial and Technology Education

(Building Technology), School of Science and Technology Education, Federal University of Technology Minna, currently undertaking a research project titled: **Factors Inhibiting the Acquisition of Building Trade Skills Among Technical College Students In Niger state**

Kindly read the attached questionnaire and assess its validity, your comments and suggestions that could enhance the validity of the instrument and also improve the quality of the instrument will be highly appreciated. I count on your co-operation while thanking you in anticipation

Yours Faithfully

Doma Habakkuk
2015/1/58540TI
BTech Research S

RESEARCH QUESTIONNAIRE

ON

**FACTORS INHIBITING ACQUISITION OF BUILDING TRADE SKILLS
AMONG TECHNICAL COLLEGE STUDENTS IN NIGER STATE.**

PART ONE

Please, complete the questionnaire as faithfully and sincerely as possible by ticking the column that best represent your perception about the above topic: the questionnaire is for research purpose and your view will be treated confidently.

Building Trade Teacher

Building Trade Student

Category: Teacher

Guide on how to respond to the questionnaire: use the following rating scale to indicate your opinion by ticking the option that best describe your level of agreement to the items

Strongly Agree = SA (4 points)

Agree = A (3 points)

Disagree = D 2(points)

Strongly Disagree = SD (1 point)

PART TWO

SECTION A

RESEARCH QUESTION 1

What are the teacher's related factors inhibiting acquisition of building technology skills among technical college students in Niger State?

S/N	ITEMS STATEMENT	SA	A	D	SD
1	Inadequate practical training given to building technology teachers affects the practical training of trainees.				
2	Lack of industrial attachment for upgrading building technology teachers' skills affects teaching of practical skills.				
3	Poor remuneration & lack of motivation Discourage building technology teachers from workshop practice.				
4	Inappropriate teaching methods affect practical skill acquisition.				
5	Inability to control large class size during practical skill training.				
6	Building technology teachers find it difficult to teach skills in the absence of adequate modern training facilities.				
7	Too much emphasis on theoretical aspect of building technology against practice during instructional delivery.				
8	Poor attitude of building technology teachers towards improvisation of training equipment.				
9	Poor professional, personal & public image accorded to building technology teachers in the society.				
10	Absence of regular in-service program for continual advancement of building technology teachers' education.				
11	Economic status of building technology teachers in technical colleges				
12	Qualification of building technology teachers in technical colleges				
13	Building technology teachers comfortability with the courses they are teaching				
14	Teachers level of satisfaction with building technology courses taught in technical colleges.				
15	Physical facilities used to enhance learning of building technology skill				

SECTION B

RESEARCH QUESTION 2

What are the student's related factor inhibiting acquisition of building technology skills among technical college students in Niger State?

S/N	ITEM STATEMENT	SA	A	D	SD
1	Difficulty in securing industrial attachment in appropriate building industry.				
2	Negligence of building industries towards accepting building trade students for industrial attachment.				
3	High priority accorded to general education by the society over building technology programme demoralizes trainees.				
4	Haphazard sequence of practical training that comes only during national examination inhibits effective skill acquisition.				
5	Non-payment of stipend to students in training during industrial training demoralizes some student.				
6	Difficulty in purchasing information & communication technology devices needed for learning skills.				
7	Inconsistencies in the financial settlement scheme for building technology graduates willing to practice their trades.				
8	The societal view that building technology program is for unintelligence & under achievers reduces students' interest				
9	The availability of obsolete training facilities leads to acquisition of outdated skills that are irrelevant to industries.				
10	Students' laziness & lack of focus on skill acquisition on a particular trade.				
11	Attitude of students towards acquiring building technology skill express by the teacher				
12	Attitude of students towards acquiring building technology skill offered to them.				
13	Adequacy of the learning resources used at technical colleges				
14	Physical facilities used to enhance the acquiring of building technology skill.				
15	Courses offered in technical colleges				

SECTION C

RESEARCH QUESTION 3

What are the strategies for improving the acquisition of building technology skills among technical college students in Niger State?

S/N	ITEM STATEMENT	SA	A	D	SD
1	Organizing professional training programs for building technology teachers on techniques for practical skills training				
2	Making available state of the art instructional materials for teaching of building technology students				
3	Encouraging school industry partnership in the curriculum planning, implementation and teaching of building technology students				
4	Encouraging school industry partnership in the funding of building technology				
5	Providing more physical facilities like computer laboratories and practical workshops for building trade				
6	Recruiting qualified building technology teachers who possess the theoretical and practical knowledge of building trade				
7	Increasing the time allotted for the teaching of building technology courses				
8	Exposing students to practical skills learning experiences like field trips, on the job training, apprenticeship training among others				
9	Appropriately motivating building technology teachers by paying them their salaries in due time.				
10	Integrating information and communication technology in the teaching of building technology courses.				
11	Adequate in-service program provided for continual advancement of building technology teachers' education.				
12	Adequate electric power supply should be made available to power training tools & machines.				

13	select appropriate teaching methods to meet specific learning objectives rather than on their own convenience				
14	Teachers of building technology should study books to integrate their knowledge to the modern They have enough knowledge of subject matter in other fields of learning to integrate with related areas.				
15	Changing of building technology class procedure to maintain their students attention, interest and to attempt to reach students varying learning styles.				