

**RELEVANCE OF SKILLS ACQUISITION IN WOODWORK TRADE BY
TECHNICAL COLLEGE STUDENTS IN OYO STATE**

By

KILANI JIBRIL OPEYEMI

2007/1/28316BT

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

OCTOBER,2012

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

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE
AWARD OF BACHELOR OF TECHNOLOGY (B.TECH) DEGREE IN
INDUSTRIAL AND TECHNOLOGY EDUCATION**

OCTOBER, 2012

CERTIFICATION

I, Kilani Jibril Opeyemi (matriculation number 2007/1/28316BT) an undergraduate of the department of Industrial and Technology Education certify that the work embodied in this project is original and has not been submitted in part or full for any other diploma or degree of this or any other university.

.....

Name

Sign/Date

APPROVAL PAGE

This project has been read and approved as meeting the requirement for the award of Bachelor in Technology Degree (B. Tech) in Industrial and Technology Education of the department of Industrial and Technology Education, School of Science and Science Education, Federal University of Technology, Mina.

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Supervisor Sign/Date

.....
Head of Department Sign/Date

.....
External Examiner Sign/Date

DEDICATION

This research work is dedicated to my parents who gave me all the much needed moral and financial support in my academic pursuit despite all odds and Mallam G. A. Usman who has been a source of inspiration through out the duration of this course.

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First and foremost, I thank God Almighty for His mercies, blessings and wisdom given to me since the beginning of my academic pursuit to this stage.

There is no doubt that the successful completion of this study could not have been achieved without the good intention, love and assistance of people of good intent and purpose. Consequently, I wish to place on record my appreciation to the following individuals for their various contributions towards my successful completion of this study.

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ABSTRACT

More than three and half decades ago establishment of technical education in Oyo state became a reality when the first Technical College took root in Oyo town. In September, 1979 one of the present five (5) existing Technical College was established in Saki (old Oyo North Area Headquarters). Locations of the other three colleges are; Ibadan, Ogbomoso and Igbooro which has been relocated to Iseyin. One of the skills so acquired, which is most commonly needed in our society today is the woodwork skill. This is the reason why the researcher attempted to examine the relevance of acquisition of skills in woodwork trade to Technical College students in Oyo State. Staff and students of various technical colleges were consulted through interactive sessions which eventually lead to the formulation of the three (3) research questions and three (3) hypothesis to guide the study. Twenty-one (21) items questionnaire were developed and used to obtain data from one hundred and twenty-four (124) respondents (comprising ten (10) teaching and non-teaching staffs and one hundred and fourteen (114) students) all drawn from Saki Teaching College for accessibility reason, while bearing in mind that establishment of technical education in the state is based on the same curriculum. The data was analysed using frequency count, mean standard deviation and t-text statistics and the hypothesis was tested at 0.05 level of significance. The tested hypothesis indicated the relevance of skills acquisition in woodwork trade to Technical College students as the study reveals that both staff and students shared similar views. In the five (5) chapters presentation of the research work, the researcher proffered some solutions based on problems discovered during the research work and suggestions for further research for improved skills acquisition in our Technical colleges

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CHAPTER I

INTRODUCTION

1.1 Background of the Study

The National Policy on Education (2004) defined vocational technical education as a comprehensive term referring to this aspect of the educational process involving in addition to general education, the study of technologies and related sciences and acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. This occupational field includes metal work, welding work, fabrication of radio and television, building technology, carpentry and joinery, cabinet making, electrical and electronics, etc. Technical education is further understood to be an integral part of the general educational method of alleviating poverty, a means of preparing for occupational field and for effective participation in the world of work.

According to Nwachewku (2007) vocational education is education for work. It prepares individual to be gainfully employed. Okorie (2006) defined vocational education as a type of education which develops the mental and physical qualities of people thereby increasing the skills, knowledge and attitudes required for utilizing the natural resources needed for economic development. Vocational education includes preparation for employment in any occupation for which specialized education is required for which there is a social need and which can be most appropriately done in school. Both vocational education and vocational training advocate the development of manipulative skills for employment. They are also geared towards productivity.

Woodwork is defined by the Advanced Learner's English Dictionary as act of making things out of wood. Woodwork therefore includes door frames, window casements, staircase, etc. Chris (2007) defined woodwork as any activity involved in the

making or shaping of object out of timber/wood. Originally, the term referred only to making interior fitting out of wood such as molding and skills ways. It is generally used to include carpentry, joinery, cabinet and furniture manufacturing.

Woodwork is a branch in vocational subject that deals with activities or skills of making things from wood. It is a course of study undertaken in school or colleges by technical students. According to Olaitan (2007) a technical college is the institution which provides recipients through training with the adequate knowledge, skill and attitudes for gainful employment under the guidance of a teacher in related occupation.

A teacher of woodwork in technical college is an individual who impacts knowledge and skill to students in woodwork either in the classroom, workshop or laboratory.

A vital objective of vocational education is to impact skill to students which will equip them for better living in the society for the utilization of practical skills thus acquire will enable student get better jobs, or be self-employed and earn more money to enhance good standard of living if they had been exposed to such training. Skill is defined as the ability to use one's knowledge effectively and readily in performing an act, or a habit of doing a practical thing competently. Skills, according to Ebenezer, (2007) is referred to expertness practiced ability, dexterity and tact. He explained that to possess a skill is to demonstrate the habit of acting, thinking and behaving in a specific activity in such a way that the process becomes natural to the individual though repetition or practice. On the bases of this, they therefore classified skills into two main components, the knowledge component and the activity component which is made up of motor and practical skills. Both skills components combine in different proportions for different skills. It is very important to note that the technical colleges equip their students with the technical skills needed to be self reliant. Woodwork program in the technical college is to be designed to

produce competent craftsmen in woodwork. The student may also wish to take the opportunity to further technical education (NBTE 2006).

A national curriculum is to be adopted in all technical colleges accredited by the National Board for Technical Education (NBTE). The program is offered at two levels leading to the award of national technical certificate (NTC) for the craftsmen and master craftsmen. The curriculum for woodwork in technical college is developed to offer a complete secondary education in general subjects in addition to the occupational areas. It consist basically three components according to the National Policy of Education (NPE 2004). The components include General Education, Trade Theory, Practical related studies and supervised work experiences.

The trade component provides the subject matter for occupational education. The trade theory and practice covers the major area of woodwork skill which includes; carpentry and joining, cabinet making machine shop practice. Olaitan (2004) pointed out that it is essential that technical colleges in light of real meaning of establishment equip the student with the skill related to the field of study for employment. National policy on education (2004) states that one of the aims of technical education is to give training and impart the necessary skills to individual who shall be self reliant economically, then technical colleges should be able to provide the student with adequate skill required for self reliance in all subject available, including woodwork.

According to Mbaja (2004), the vocational needs of Nigeria required not only that unskilled labor is being reduced to a minimum but also that adequate engineering and science technician be produced in their respective occupational fields. It is the duty of the school to provide the youth in primary and secondary school with the educational experience relevant to the future vocational plan. It is also the responsibility of technical

and vocational school to give student the required training for competences in specific occupation.

Employment is the state of having being given or engaged in a job for some form of payment. Employment could either be full time payment or self employment. In Nigeria, it is apparent that a number of people are unemployed while most people may be grossly under employed due to several factors some of which may be within or outside the power of an individual. For one to be self employed in woodwork, he or she needs skills that will enable one undertake the woodwork activities encountered in the world of woodwork. The skills among others, include repairs of damaged or defective woodwork item, ability to perform the various turning operation on the wooden, leather making out and joint making mortising having carried out drilling effectively, working with portable machine tools are some of the skills needed in the machine shop. The knowledge of maintenance repair according to Iwuoha (2006) is essential in the manning of any commercial business.

1.2 Statement of the Problem

In the technical colleges the main emphasis is the acquisition of skill required for employment. Iwuoha (2006) pointed out that most of the technical colleges are good in theoretical aspect of training while the performance level in the practical aspect is very low. As a result of this situation the graduates from the college cannot help themselves out of the frustration of unemployment in Nigeria today. Hence the high rate of unemployment of the technical college graduate persists. Olaitan (2006) remarked that in Nigeria where resource abounds many craftsmen are without jobs because their training is irrelevant or inadequate to societal needs. Therefore, it is only a practical oriented skill

training program geared toward self employment that could make graduates of technical colleges and other vocation productive.

Woodwork students in technical colleges who complete the program are supposed to have acquired skills needed for self employment in the industries. However, the present situation of employment in the country is an indication that the national goal of self reliance has not been achieved.

In spite of the importance of woodwork skills to the development of both individual and the society at large, there is no emphasis placed on effective acquisition of skill in woodwork program in Nigeria. The frequent occurrence of low student participation in woodwork as a course has been a great concern to all well-meaning individuals, institute and industries. It is in the light of the above that the present study was carried out to ascertain if there are factors responsible for the non-effective acquisition of woodwork skills in technical colleges in Oyo State.

1.3 Purpose of the Study

The objective of this research is to identify the relevance of acquisition of skill in woodwork trade in technical college in Oyo State. Specifically the study sought to:

- 1) Identify the practical skill needed in woodwork by technical students.
- 2) Identify the theoretical aspects of woodwork needed by student for self employment.
- 3) Identify the constraints militating against the acquisition of skill in woodwork.

1.4. Significance of the Study

The study will be of benefit to the following people:

- 1) Teachers; i.e. woodwork Teachers,

- 2) Woodwork students and
- 3) Curriculum planners.

This research will benefit woodwork teachers by helping them understand specific areas where the students are lacking behind and they will also know the importance of acquiring that very skill.

The findings in this study will benefit the students. It is impossible for a student to perform above his required skills. If necessary woodwork skills are acquired, it would enable the student to be self reliant and they will be able to get established after graduating from the technical college. This invariably would save them from wandering about indefinitely searching for job that are not forthcoming. They could rather become employers than job seeker who most often become unfortunate to meet with certain disaster in the process of looking for employment. When the skill required is acquired by the students, they develop confidence in themselves and could handle any woodwork job that comes their way in the world of woodwork.

The research will also benefit the curriculum planners in technical education to review the curriculum of technical colleges. Thus, the curriculum will be restructured to suit the modern needs of industries. When this is done, technical college woodwork program will meet one of the objectives of the national policy on education that is to give training and impart the necessary skills leading to the production of craftsmen, technician and other skilled personnel who will be marketable and self reliant.

Furthermore, the finding of this study will be beneficial to inspector and instructional supervisors of the Ministries of Education in Nigeria. These educational offices could be exposed to wide range of technical skills of

woodwork and their relevance. This could help create empirical basis for most of government decision in terms of implementation.

1.5. Research questions

The following research questions guide the study

- I. What are the practical skills needed in woodwork by technical college students for self employment?
- II. What factor militates against the acquisition of both theoretical and practical skills by woodwork student in technical colleges?
- III. What are the constraints militating skill acquisition in woodwork technology?

1.6. Hypothesis of the study:

The working hypothesis the researcher intended to test so as to enable the researcher make a valid statement about the study are:

- 1) Theoretical skills needed in woodwork trade needed by Technical College Students.
- 2) Practical skills needed in the woodwork trade by Technical College Students in Oyo state.
- 3) Obstacles militating against the acquisition of sound theoretical and practical skills in woodwork trade by Technical College students.

1.7 Scope of the Study

This research focuses on the relevance of the acquisition of skills in woodwork trade by technical college students in Oyo state.

CHAPTER II

2.0. REVIEW OF RELATED LITERATURE

The review of the related literature to this study will be organized under the following sub- headings:

- 1) Concept of skill acquisition
- 2) Theories of skill development
- 3) Concept of self employment
- 4) Theoretical skills needed in woodwork
- 5) Practical skills needed in woodwork
- 6) Factors militating against acquisition of theoretical and practical skills in woodwork
- 7) Summary of literature review.

2.1. Concept of Skill Acquisition

The Oxford Advanced Learner’s dictionary defines need as something that is required not just because one would like to have it but also because it is essential or very important and necessary. It therefore favors that any skill that is very useful in woodwork which a student has not acquired becomes a need to such a student.

Precisely in the words of Mc-Carthy (2006), the concept of needs indicates that there is in existence a difference between “what is” and “what ought to be”. This difference has been observed in the skills acquired by the woodwork student who graduates from technical college; hence the need to identify the relevance of the acquisition of skills in woodwork. It is very necessary to have a good knowledge of the theories that relates to the transfer of learning skills.

People learn throughout their lives in different ways at different levels. Even at old age, people still acquire new skill such as learning to cope with diminishing physical

power and ability. According to Ezeji, (2006) most learning consist of a built up skill and knowledge. She stated further that to learn one complete skill, it is first necessary to have mastered several other simpler ones. And that whatever age the learner is, and what ever been the skill learnt, the various stages that make up the skill must be practiced over and over again before they become fully automatic. Some of the theories of transfer of learning, which is related to the skill and acquisition, reflect on how the student acquires or learns skill by which they could solve their basic problems and those of the society. That is, these theories work at the best way of transferring skills to the learner in such a way that the learner can use these skills in the wider environment outside the classroom or learning environment.

In support of this fact: Jauro (1998) and Chauhan (1999), stated that the skills existence in our school is based on the premises that the knowledge, skill and attitude developed. To explain the phenomenon of transfer included: theory of learning and the theory of transposition, Chauhan (2005). Our focus will be based on the first two theories.

According to Hilton (2003) transfer of skills can occur from one learning situation to another. If two functions have factor identical elements when two activities have common factors and the total situation has important characteristics in common, the maximum transfer occurs. Thorndike stated further that for transfer to occur there should be identities of substance and the identities of procedure in the two situations. This explains the fact that the experiences of schools are similar to daily life situations; the greater is the amount of transfer. This theory is relevant in the effort to provide for the skills needed by technical students for self employment. It stresses the fact that the materials and the production procedure the student would encounter in daily situation should be used in training or teaching them.

2.2 Theory of Generalization

Theory of generalization believes that transfer would be insured if student are taught general principles rather than specific situations.

According to Jauro (2001) in Chanhan (2000) transfer of skill and acquisition can be facilitated by teaching student general principles rather than specific solutions. This theory developed by Judy, very important in the acquisition of skills, is saying that teaching should stress on skills that could be applied in varying situations or conditions rather than those that are limited to a specific situations. For instance, a student who is being taught the process of cutting or sawing of timber should be made to understand the best position to take during cutting or sawing and to note the pressure applied during this period. The student can then apply this principle to any method of cutting. In this process, skills have being transferred.

In line with the student, Ezeli (2007) stated that if the teacher is not able to teach so that the student can apply the learning to real life situation, there is no need for teaching. The quality of their teaching, according to Boorer (2007), and learning also depends very much on the leaner being able to see or hear the result of his action and thus estimate his error and correct them. Considering the theory of transfer so far discussed, the teacher must keep in mind that transfer is not automatic but actually acquired through the effort of both the teacher and the learner. The role of the teacher according to Chauhan includes:

- 1) Maximizing the similarity between teaching and the ultimate testing situation.
- 2) Making sure that general principles are understood.
- 3) Identifying and stressing the important features of a task.
- 4) Providing adequate experience with original task.

Importance of Skills Acquisition by Students

Skill acquisition may be regarded as the process in which an individual exposed to learning and continuous practice in a particular task becomes proficient in the operation and can perform them easily when required.

Aguokogbuo (2004) remarked that no nation looking forward to industrialization can neglect the acquisition of relevant technological skills by her citizens. Consequently, more and more people in Nigeria today are expected to acquire scientific knowledge and skills to develop new techniques in the constant search to improve living condition.

Skills acquisition improve performance in practice but to understand he skills acquisition improves performance we need to know three (3)key skill acquisition aspect.

- How body processes information
- How learners, task and the performance differ
- How to setup the most effective practice for that learner and task

To improve performance through skill acquisition Schmidt and Wrisberg (2004) suggest that it is important to understand the conceptual model of human performance as this is the fundamental basis of skill learning. They further suggest that understanding the conceptual model allows you ‘to determine things like the possible effects of the task demands on the three information-processing stages, the extent to which performers can make feedback-based adjustments to their movements, and the types of intrinsic and extrinsic information learners need to improve their skills and develop their error detection capabilities.

Importance of skill acquisition cannot be over-emphasized because its role to national development are multi-dimensional but of the particular mention are the followings:

- Elimination of hunger and poverty

- Reduction or elimination of joblessness
- Reduction of crimes through effective engagement of youth. (Diigo 1989)

Skills development has been man's means of material transformation from the earliest of time. According to Diigo, (1989), it takes trained hands and minds to apply the knowledge and techniques effectively. The industrial revolution brought with it the factory system with far reaching historical effects and increasing application of science and technology to goods manufacture and services with more emphasize on industrial skills. These shift demand a wide spectrum of technical and professional personnel, crafts men, technicians, engineers, production specialist, manager and so on.

According to Achegbulu; (2004), it is pertinent to state that because of the contending forces particularly the down-turn of economy, it is aptly different for government or even parents to be depended upon in the on-going socio-economic scenario. Hence, the youth are called to rise and depend on their skills and knowledge.

Theory of skills acquisition

Vocational education theories are concerned with the individual desire to chose a career and succeed in such a career. Some of these theories, which relate to skill acquisition, emphasize how a teacher makes the best out of his or her career. This implies a functional teachers theoretical and practical skill competence.

Ibom, (2004) stated that Anne Roses theory which is one of them, emphasizes that individual has the tendency to develop his potential in a particular way. The frat and fact theory stressed that individual characteristics guide the choice of occupation and progress in such an occupation. The theory assumes that once the characteristics (skill, aptitude, interest etc.) matched, the problem of vocational choice of the individual is solved

The need theory of vocational development emphasizes that desires and wants influence individual preference from one occupation to another. It is the choice that compels one to desire improvement. Harcourt (1957) stressed that needs whether conscious or unconscious are major determinant of vocational choice and this agrees with the needs theory. One of the major aspect of traditional epistemology and its manifestation in artificial intelligence research and the philosophy of mind is its emphasis on the formal system of deduction and premises and propositional knowledge.

Hubert and Stuart Dreyfus argue that this formal system of deduction is one of the problems with traditional epistemology, since much of our sense of judgment and process which we go through to form beliefs is not a matter of starting with premises and by plugging them into a formula in order to deduct conclusions. But rather it is a gradual process that involves being embodied in different ways and developing skills that would make it possible for us to deal with the world. The main idea behind Dreyfus's and Dreyfus skill development theories is the distinction that make between 'Knowing that' and 'knowing how'. Several authors have suggested that formal education and post-school skill acquisition are substitutes. One of the firsts to express this idea was Maton (1969), who showed that the level of skills required for a job can be obtained by several alternative combinations of formal education and experience on the job. Also in later contributions, authors stated that company training operates as a way to match attained to required skills

2.3 Concept of self-employment

Mc-Cathy, (2007) defines self employment as the ability to engage oneself in an occupation or engage oneself independently of an employment. Self employment is a way to achieve employment goal not a goal in itself but all individual participating in vocational service are expected to establish an employment that is consistent with their

strength, resources, priorities, capability, career, interest, and inform choice. Once an employment goal is established self employment can be one's option within the labour market to achieve goal. If an individual demonstrates the skills necessary to develop and run business, self employment may be viable.

Annoe (2006) , specific vocational skill leading to self employment skill focus on helping individual apprehension, computation, and culture. Again individual and personal reliability skills in the area of personal management, ethics and vocational maturity, economic adaptability, skills leading to problem solving, learning ability and various development will be acquired and effective skills leading to inter personal skill organization, negotiating skills, creativity and leadership are all needed to achieve long term and sustainable self-employment.

According to main characteristics of self employment subject emphasized by authors, self-employment can be defined as a simplified form of entrepreneurship, where a person, by combining financial resources and personal capacity offer market (consumes) goods services in order to obtain financial and (or) non-financial benefits and assuming the risk of self-employment. Although several researchers (Bradley, Robert, 2004; Stel, Carrey, Thurik, 2005) argued that self-employment cannot be identified as entrepreneurship, because they simply cannot reflect the actual level of entrepreneurship in the country, and not all self-employed persons can be considered as entrepreneurs , however, the entrenched attitude in society about the links between these phenomena allows them to be synonymous. So it was concluded that there is no scientific consensus on the concept of self-employment and self-employment subject is still the subject of debate.

2.4 Theoretical skills needed in woodwork

Woodwork deals with trees. It is made up of long cells which grow closely forming a compact yet porous material and the wood when converted into commercial sizes is used for production of items of furniture for households. Hence the art of woodwork is defined by Advance Learners Dictionary as an act of making things out of wood.

Many civil engineering components and projects are produced from wood normally in commercial sizes, which is cut to sharp and formed to a finished article. The finished sharp is accomplished by assembling work pieces together as the function of a woodworker. According to Okelola, (2004) it varies according to types of object, although the procedures are as follows;

Various operations according to him, may require the use of numerous woodwork machines in addition to the wide range of hand tools such as measuring tape, saw (e.g. rip saw, tenor saw, etc) bite brace, mallet, marking gauge, chisel, hammer etc. Some of the theoretical skills a woodwork student should know includes:

- How to design a project given a brief description of what you are to make
- How to use the internet for research purpose
- How to us freehand sketching to communicate your ideas
- How to prepare a design drawing/plan of a project you design
- How to read design drawings and make small project from these drawings

2.5 Practical skills needed in woodwork

Working Drawing In Woodwork

A working drawing is a full view drawing of an object in which all the surface of an object is shown in the plane i.e. the working drawing which represents the surface of the object unfold or unroll or spread in the plane of the drawing, so that the entire surface and details are seen in one plain true size without any shortening.

According to Evans and Herr (2005), the accuracy of size and shape of finish article depends upon the accuracy of drawing workmanship. They (Evans and Herr) stated further that the allowances are made at these stages for mortising and tenoning depending on the thickness of wood and radius of the joint. A good woodworker should be able to produce working drawings, cutting list, marking out tools and cutting tools. He should be skillful in the use of wood turning lather machines, surface planner, band saw, circular saw machines and woodwork equipment.

Mortise and Tenon

The mortise and tenon joint is the most frequently used in construction of chair legs, car case, table, locker etc and they are usually screwed or nailed. According to Okwori, (2012) mortise and tenon joint is a strong joint used to frame member at right angles in joinery work. It is also used in better quality house frame construction. The most common is the blind mortise and tenon. A rectangular opening called the mortise is cut in one piece i.e. the rail and the tenon is cut at the end of the other piece i.e. stiles. The tenon should be about one half of the thickness of the stock. The bare faced mortise and tenon is used where the legs and the rail surface must be flush. Commonly, the open mortise and tenon is used in frame constructions.

Carpentry and Joinery

Advanced Learner Dictionary defines carpentry as work which involves the construction and pairing of wooden parts of building and other structures of wood such as docks, decking wharfs. According to Macky, (2005), carpentry is the art of science that deals with cutting, fitting and assembling wood or related materials in the construction of building bridges, pier and many other structures made from such materials.

Carpentry is a rewarding but demanding trade. The work can be divided into many categories but all of them centre on using wood (CUHP, assembling, fitting e.t.c.) to construct. Each aspect of carpentry demands patience, organizational skill and the necessary physical skills. Carpenters may work individually or as a group or team. A good carpenter is a key player in many parts of the construction process.

Carpentry generally is that aspect of woodwork that includes structures such as wooden floors roofs, partitions and lintels (wood member at the heads of doors and window opening) carpentry also embraces temporary work including timbering for digging where there is likelihood of object falling from the roof or multi storey building floors.

Cabinet Making

According to HILTON (2004), cabinet making is the aspect of woodwork which is concerned with the making of items of furniture such as beds, chairs, tables, benches, etc. This branch of woodwork is normally carried out at the joiners workbench shop. Cabinet work applies mainly to articles of furniture and other accessories used at home and which under normal circumstances would be made by specialist according to Mbaja (2000). Prosser (2006) stressed further that wood has a pleasing range of natural Color,

due to the annual structure of graining and to a member of serious satisfactory surfacing treatments.

However, wood carving is the process of shaving wood into decorative and sculptural forms. Because of the nature of these articles, attention to details, accuracy and finishing is most necessary. The type of joint selected for any part of cabinet work usually matters for individual references. One of the most important things to remember when constructing any article of cabinet is that wood moves and walks that is, it swells and shrinks with the changes in the atmospheric conditions. It takes up moisture from the damp air and swells and loses moisture according to Jauro, (2012).

Types of Cabinets

The term “carcasses” is given to the box like part of a cabinet i.e. the part with door or drawer. It may be supported on legs, on some form of base, suspended on a wall such as a bookcase or shaving cabinet. Mc – Carty (2001) they are cabinet carcass, bookcase carcass.

Precautions to be Observed

The following precautions according to Okelola (1995), are observed when working on cabinet project:

- ✓ Personal dress in workshop:

Wear short sleeve shirt, tuck in and remove your tie, wear apron or shop coat. Remove rings and lose necktie, as all can cause accident while in the workshop.

- ✓ Keep floor clean:

Remove all scrape of wood from the floor; this will prevent you from falling. A clean shop is usually a safe shop.

- ✓ Avoid the use of hand tools:

Dull tools are very dangerous, keep your tools sharp and avoid placing hand tools on machine beds. Always use the right tool for the right Job; it also gets the job faster. Always check electrical tools before using them. Check for broken plugs, bad connectors, broken switch or poor installation on the cord. Keep electric cord away from hot and oily places. Be sure that your hands and feats are dry when using electric tools.

- ✓ Woodworking Machines:

Always use mechanical safe guards and keep safety device in good condition. Allow no one to be near the machine when operating. More so, turn off the machine when making adjustments on the machine and allow R.P.M revolution to come to a dead stop.

Types of Joints Used

The types of joints used are:

- ✓ Tongue and glue joint
- ✓ Rebate and doratail joint
- ✓ Tongue miltre joint

Joint used in door construction are: dowelled joint, mortise and tenon joint

Tools used for cabinet construction includes:

- Saw
- Jack plane
- Marking gauge
- Metal spoke shape
- Hammer

- Clamp etc.

2.6 Factors militating against the acquisition of theoretical and practical skills in woodwork

There are many factors militating against acquisition of theoretical and practical skills in woodwork. Since the formulation of the National Policy on Education (NPE, 2004 Revised) effective training and development of the manpower in technical education has never been problem free.

This problem will be treated under the following heading:

- 1) Tools, equipments and training materials
- 2) Admission criteria
- 3) Funding and economy
- 4) Teaching personnel

Tools, Equipment and Training Materials

It is required that there should be adequate tools and equipment for students to work in the course of their training and that the tools and equipments should be similar to those to be encountered in the world. The reversed has always been the case in our technical colleges, Mbata (1990).

Admission Criteria

According to Mbata (1900) students should be allowed their intrinsic intelligent, interest, aptitude and initiative to the highest possible degree and that training should be given to those who need it and can profit it. Hence, students should be admitted into trade course that suit their ability to enable them effectively acquire skills.

Funding and Economy

Fafunwa (1992), in his view of the state of funding of technical college education in Nigeria states thus:

Modern technical college is capital intensive and changing nature of technologies it deals with and that this tends to escalate cost. But the government is not always in a position to grant the required as cited from Chanchan, (1998).

According to Aguakobuo (2003), many good educational innovations, policies and instruments and students services need money. It is the financial foundation that actually determines the adequacy and relevance of school teaching materials, physical learning environment, and teacher's remuneration etc. Incidentally all these influence the level of skills acquisition by students. With the irregular and most times, delayed payment of teachers salaries couple with the dwindling economy, most teachers now spend more times, moonlighting than teaching as high inflations reduces the value of their salaries.

In this situation, students do not acquire the level of skills they are supposed to acquire at the time of their educational program because teachers do not dedicate their time and effort to teach them (students). As revealed by Chukwu (2003) that adequate remuneration, according to their due respect and recognition, prompt payment of allowances and other benefits will motivate them to greater performance.

Teaching Personnel

According to Aguokogbuo (2003), he observed that most technical college programmes experience shortage of teaching personnel. He observed a situation where due to lack of teachers, a single woodwork teacher is made to teach as much as fifty six (56) students at practical lecture in an ill-equipped workshop. It is absolutely clear that learner will not be able to meet up. In this situation, the teacher is more or less trying to

teach a crowd which will obviously not be granted effective skills and acquisition. An assessment of such students will prove that no reasonable skills is acquired.

2.7 Summary of related literature

The slow pace of technological growth as well as high rate of unemployment accounts for lack of skills in technical colleges. As this lack of skills renders technical college graduates jobless, this consequently keeps Nigeria perpetually among the under-developed countries of the world.

Literature review showed that lack of workshop tools and equipment and skilled personnel greatly influence skill acquisition. However the research work on skills acquisition were focused on the areas of technical education woodwork.

Relevance of skills acquisition in woodwork trade to Technical College students in Oyo state could be viewed going by the views of some major authors quoted above.

For instance, Ezeji remarked that to acquire a greater skill, smaller skills and Knowledge both interplay repeatedly before greater success can be achieved. He remarked further that teaching of skills by teachers should be done in such a way that students would be able to apply the teaching techniques in their daily life activities should the skills taught be having any relevance. Hilton on his part believes that skills acquired are transferable from one learning situation to another. But Boorer insists on the good efforts and understanding of both the teachers and students respectively should the required skill be acquired, since skill transfer is not automatic. Harcourt maintains that needs; whether conscious or unconscious form the major determinant of vocational choice of any individual. Aguokogbuo summed it up by saying that acquisition of relevant technological skills is very much necessary if a nation seeks to attain economic development.

Hence, the relevance of acquisition of skills in woodwork trade to technical college students in Oyo state cannot be over emphasized.

CHAPTER III

METHODOLOGY

This chapter deals with the description of the research design adopted. The population of the study, sample and sampling techniques, instrument needed for data collection, validation of the instrument, method of data analysis are described.

3.1 Design of the Study

The design adopted in this study was the survey type of educational research. According to Nworgu (1991), “a survey research is one in which a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representatives of the entire group.” Since information will be collected on existing situation, this research design was considered very appropriate. The opinions of respondents will be analyzed to reach decisions as regards the content coverage.

3.2 Area of the Study

The study was carried out in the technical college located in Saki, Oyo State. There are five (5) technical colleges in the state namely: Ibadan, Saki, Ogbomosho, Oyo and Iseyin. Since technical education in Oyo State is based on the same curriculum, Saki technical college was chosen to represent the study area.

3.3 Population of the Study

The population of the study comprises of both the teaching and non-teaching staff as well as the students of the technical college in Saki, Oyo State. As at the time of this research, the total number of the teaching and non-teaching staff stood at twelve (12) and

the students numbered one hundred and fourteen (114) bringing the total population to one hundred and twenty-six (126).

3.4 Instrument for Data Collection

The instruments used for collecting data for the study were questionnaires simply developed by the researcher based on the purpose of the study. The questionnaire was made of twenty-one (21) items divided into three (3) sections. Each section sought for data to answer related questions. The sections are;

Section A

What are the theoretical skills needed by the Technical college students in Oyo State for self reliance in the woodwork industry?

Section B

What areas of practical skills do students of the technical college in Oyo State need for self-employment in the woodwork trade?

Section C

What are the obstacles affecting the acquisition of sound theoretical and practical skills by technical college students towards self-reliance in woodwork trade and National development?

The items were structured using Likert scale. Likert in 1932, developed the principle of measuring attitudes by asking people to respond to a series of statement about a topic, in terms of the extent to which they agrees or disagree with them, and so tapping into the cognitive and affective components of attitudes. It is a five (5) or seven (7) point scale.

For the purpose of this research work only four (4) of the points would be used.

i.e:

Strongly Agreed	=	SA
Agreed	=	A
Disagreed	=	DA
Strongly Disagreed	=	SD

3.5 Validation of the Instrument

According to Aborisade (1997) validity of a research instrument is the ability of the instrument to measure what it is designed to measure. Hence to ensure the reliability and validity of the research instrument used in this study, the draft questionnaires were first administered to two retired principals in Ogun state, a serving teacher in Osun state and my supervisor who eventually confirmed the instruments validity in promoting full understanding of the various contents of the questionnaire. The corrected copy was then reproduced and issued to the respondents.

3.6 Method of data Collection

The data used for this study was collected by the use of questionnaires which were generated expressly for the purpose of this study and were personally administered and collected by the researcher. A total of one hundred and twenty four (124) copies of the questionnaires were issued out: The laborer and the night guard were left out

3.7 Method of Data Analysis

The data obtained from the responses to the questionnaire items were analyzed to help answer the specific research questions raised for the study, using means score as the bases for computation.

The questionnaire involved four (4) response types' rated as indicated below;

Strongly Agreed	(SA)	=	4
Agreed	(A)	=	3
Disagreed	(DA)	=	2
Strongly Disagreed	(SD)	=	1

Decision Rule:

In order to determine the level of agreement or disagreement of the respondents to the items and to retain the sensitivity of the instrument, real-limits of numbers will be used.

Response	Rating	Real-limits
Strongly Disagreed (SD)	1	0.5-1.49
Disagreed (D)	2	1.5-2.49
Agreed (A)	3	2.5-3.49
Strongly Agree (SA)	4	3.5-4.00

Hence, based on the four (4) point rating scale, the cut-off point was fixed at 2.50. It therefore means that any item with a mean of 2.50 and above is considered as *agreed*, and item within the mean range of 2.49 and below is considered as *disagreed*

The chosen t-critical value based on the 124 degree of freedom was ± 1.66 . Therefore any item that has its calculated t-less than or equal to t-critical value was

regarded as *not significant*; while any item that has its calculated t-value greater than the t-critical value was regarded *significant*.

CHAPTER IV

4.1 Presentation and Analysis of Data

This chapter is designed to present, analyze and interpret the data obtained through the instrument i.e. the administered questionnaire. The results of the data obtained were also presented based on the research questions and the hypothesis developed that guide the study.

4.1.1 Research Question 1

What are the theoretical skills needed by the Technical college studies in Oyo state for self-reliance in the woodwork industry?

The result analysis of data obtained for this research question is presented in Table 1 below

Table 1: shows the mean score of the theoretical skills needed by Technical college students in Oyo state to make them self-reliant in the woodwork industry

$N_1 = 10, N_2 = 114$

S/NO	ITEMS	\bar{X}_1	\bar{X}_2	\bar{X}_t	Remark
1	Skills necessary to develop and run business	3.20	3.68	3.44	Agree
2	Individual and personal reliability skills in the area of personal management	3.10	3.65	3.38	Agree
3	Vocational maturity and economic adaptability skills leading to problem solving	3.50	3.63	3.57	Agree
4	Inter-personal skills organization and	3.30	3.50	3.40	Agree

	negotiation				
5	Creativity and leadership skills	3.70	3.56	3.63	Agree
6	Machine/equipment maintenance culture and precautionary skill	3.10	3.90	3.50	Agree
7	Develop interest in the job	1.50	1.88	1.69	Disagreed
8	Ability to speak clearly	2.00	1.60	1.80	Disagreed

Key:

N_1 = (staff Teaching and non-teaching staff)

N_2 = Students

\bar{X}_1 = mean responses of staff

\bar{X}_2 = mean responses of students

\bar{X}_t = Average mean of both staff and students

Table 1 shows that the staff and the students of the Technical College, Saki, Oyo State agreed that theoretical skills are needed by Technical College Students in Oyo State to make them self reliant in the woodwork industry as reflected in the means scores of items 1, 2,3,4,5, and 6 with their mean score greater than 2.50 respectively, while items 7 and 8 with their means scores below 2.50 indicated the indifference of the staff and students of the Technical College.

4.1.2 Research Question 2

What areas of practical skills do students of Technical Colleges need for self-employment in the woodwork trade.

The result analysis of data collected for this research question is presented in Table 2 below.

Table 2: shows the mean score of the practical skills Needed by Technical College Students for self-Employment in the Woodwork Trade.

$N_1 = 10, N_2 = 114$

S/NO	ITEMS	\bar{X}_1	\bar{X}_2	$\bar{X} t$	Remark
9	Drawing workmanship skill	3.30	3.86	3.58	Agreed
10	Communicate verbally with client	1.50	1.61	1.56	Disagreed
11	Carpentry and Joinery skills	3.60	3.96	3.78	Agreed
12	Mortising and tenoing	3.60	3.96	3.78	Agreed
13	Skill in appropriate ratio mixture of vanish for finished jobs	3.60	3.92	3.76	Agreed
14	Skillful in using various woodwork equipments	3.70	3.79	3.75	Agreed
15	Be honest and trust worthy	2.00	1.91	1.96	Disagreed

Table 2 reveals that the staff and students of the Technical College agreed with items 9, 11, 12, 13, and 14 with means scores above 2.50 respectively, while they disagreed with items 10 and 15 with mean scores below 2.50.

4.1.3 Research Question 3

What are the obstacles affecting the acquisition of sound theoretical and practical skills by Technical College students towards self-reliance in woodwork trade and National Development?

Result analysis of data collected for this research question is presented in Table 3 below.

Table 3: shows the mean score of obstacles affecting acquisition of sound theoretical and practical skills by Technical College Students

$N_1 = 10, N_2 = 114$

S/NO	ITEMS	\bar{X}_1	\bar{X}_2	\bar{X}_t	Remark
16	Inadequate Funding	3.40	3.82	3.61	Agreed
17	Parents / students apathy towards technical education	2.90	3.25	3.08	Agreed
18	Inadequate tools, equipment and training material	3.20	3.75	3.48	Agreed
19	Lack of adequate practically skilled teaching personnel	3.50	3.50	3.50	Agreed
20	Admission criteria	3.10	3.10	3.10	Agreed
21	All of the above	3.90	3.39	3.65	Agreed

Table 3 above reveals that the entire staff and students agreed with items 16, 17, 18, 19, 20 and 21 with mean scores above 2.50 respectively. This indicated that neither a staff nor a student disagreed with the items.

4.1.4 Hypothesis 1

There is no significant difference in the mean responses of the staff and the students on the theoretical skills needed by Technical College Students in Oyo State for self-reliance in the woodwork industry.

Table 4: t-test Analysis of the Respondents on the Theoretical skills in woodwork trade needed by Technical College Students

S/NO	ITEMS	SD ₁	SD ₂	t-cal	Remark
1	Skills necessary to develop and run the business	0.96	0.39	-5.13	NS
2	Individual and Personal reliability skills in the area of personnel management	0.89	0.37	-6.84	NS
3	Vocational maturity and economic adaptability skills leading to problem solving	0.45	0.26	-6.24	NS
4	Inter-personal skill organization and negotiation	0.21	0.26	-40.8	NS
5	Creativity and leadership skill	0.21	0.25	-28.2	S
6	Machine and equipment maintenance culture and precautionary skill	0.89	0.64	-9.66	NS
7	Develop interest in the job	0.25	0.11	-59.8	NS
8	Ability to speak clearly	0.20	0.31	82.6	S

Key:

N₁ = staff

N₂ = Students

SD₁ = Standard deviation of staff

SD₂ = Standard deviation of students

t-cal = t-test of both staff and students

S = Significant

NS = Not Significant

The result shown in table 4 above indicates the comparison between staff and students. The data revealed that items 1, 2, 3, 4, 6, and 7 have a calculated t-value less than the t-critical value of ± 1.66 , hence hypothesis H_{O1} for these items were upheld at 0.05 level of significance; while items 5 and 8 have t-calculated value above the t-critical value of ± 1.66 . Thus the hypothesis H_o , was accepted for the items.

4.1.5 Hypothesis 2

There is no significant difference in the mean response of the staff and students of the Technical College as regards the practical skills needed for self-employment in the woodwork trade.

Table 5: t-test Analysis of the Respondents on the practical skills needed in the woodwork trade by Technical College Students in Oyo State.

N₁ = 10, N₂ = 114

S/NO	ITEMS	SD ₁	SD ₂	t-cal	Remark
9	Drawing workmanship skill	0.41	0.16	-32.8	NS
10	Communicate verbally with client	0.25	0.24	-16.3	NS
11	Carpentry and Joinery skills	0.24	0.03	-54.1	NS
12	Mortising and tenoning	0.24	0.03	-54.1	NS
13	Skill in appropriate ratio mixture of vanish for finished jobs	0.24	0.07	-55.1	NS
14	Skills in the use of various woodwork equipments	0.21	0.17	-19.3	NS
15	Be honest and trust worthy	0.20	0.08	22.7	S

The result shown in table 5 above indicates the comparison between the staff and students of the Technical College. The data revealed that items 9,10,11,12,13, and 14 have a calculated t-value less than the t-critical value of ± 1.66 , hence hypothesis H_{02} for these items were upheld at 0.05 level of significance, while item 15 have t-calculated value above the t-critical value ± 1.66 . Thus, the hypothesis H_{02} was accepted for the items.

4.1.6 Hypothesis 3

There is no significant difference in the mean responses of both the staff and students on the obstacles militating against acquisition of sound theoretical and practical skills in the woodwork trade towards self reliance and national development.

Table 6.1: t-test Analysis of the Respondents on the obstacles militating against the acquisition of sound theoretical and practical skills in the woodwork trade by Technical College students.

$N_1 = 10, N_2 = 114$

S/NO	ITEMS	SD ₁	SD ₂	t-cal	Remark
16.	Inadequate funding	1.04	0.29	-3.85	NS
17.	Parents/Students apathy towards technical education	0.89	0.59	-4.17	NS
18.	Inadequate tools, equipment and training materials	0.16	0.19	-191.1	NS
19.	Lack of practically skilled teaching personnel	0.25	0.25	0	NS
20.	Admission criteria	0.49	0.30	0	NS
21.	All of the above	0.09	0.24	0	NS

The result shown in table 6 above indicates that the calculated t-value of items 16, 17,18,19,20 and 21 are less than the t-critical values of ± 1.66 , hence hypothesis HO_3 for these items were upheld at 0.05 level of significance, while there is no item with a t-calculated value above the t-critical value of ± 1.66 , thus hypothesis HO_3 was accepted for these items.

4.2 Findings of the Study

During the research work, the following findings were made based on the content coverage of the study.

1. The theoretical skills needed by technical college students to make them self reliant in the woodwork business are hereby highlighted.

- Skills necessary to develop and run business.
- Individual and personal reliability skills.
- Vocational maturity and economic adaptability skills.
- Inter-personal skills organization and negotiation.
- Creativity and leadership skills.
- Machine and equipment maintenance skills.
- Workshop safety precautionary skills.p
- Skills leading to problem solving.

2. Practical skills needed for self employment in the woodwork trade include:

- Workmanship drawing skill.
- Carpentry and joinery
- Mortising and tenoning
- Appropriate ratio mixture of varnish for finished jobs; and

- Skillful in using various woodwork equipment

3. Obstacles militating against the acquisition of skills by technical college students in the woodwork trade include;

- Poor and inadequate funding of the institution.
- Parents/Students apathy towards technical education
- Inadequate tools, equipments and training materials.
- Lack of practically skilled teaching personnel, and
- Admission criteria.

4.3 Discussion of the Findings

It should be emphasized that the discussion of the various findings was based on the research questions and hypothesis formulated.

Hence under research question 1, the findings of the study indicated the theoretical skills needed by graduates of Technical College for self-employment in the woodwork trade. As defined by Mc. Cathy (2007) self employment is the ability to engage one self in an occupation or engage oneself independently in an employment. Theoretical skills in woodwork were found to be pre-requisite for self employment in the woodwork trade judging from the respondent to research question 1. It is certain that if an individual demonstrates the skills necessary to develop and run the woodwork business, self employment may be viable.

The findings also indicate that individual and personal reliability skills in the area of personnel management, vocational maturity, economic adaptability and skills leading to problem solving are all ingredient necessary for self-employment in the woodwork business. It is also revealed by the findings that effective skills leading to inter-personal

skills organization and negotiation, creativity and leadership skills are all needed by Technical college graduates to achieve long term and sustainable self-employment.

Under research question 2, the practical skills needed in woodwork by Technical College students were discovered to be essential component in the self-employment of the students of woodwork as this was confirmed by the respondents to research question 2. “The accuracy of size and shape of finished article depends upon the accuracy of drawing workmanship”, (Evans and Herr-2005). Evans and Herr stated further that the allowances are made at this stage for mortising and tenoning depending on the thickness of wood and radius of the joint. Therefore, and as indicated in the findings, a good wood-worker should be able to produce working-drawings of all objects of woodwork needing construction.

The findings indicate that, for a person to be self-employed in the woodwork trade, adequate skills in carpentry and joinery must be acquired. That means a woodworker must be skillful in cutting, fitting and assembling wood or related materials in the construction of building, bridges, pies and many other structures made from such materials. A woodworker must be skillful in mortising and tenoning as well as applying finishes to wood surfaces.

The findings also indicated that students of woodwork should be skillful in the use of various woodwork machines and equipments such as wood turning lather machines, surface planner, handsaw machine, circular saw machine e.t.c., to enable them actualize their dream of becoming self-employed in the woodwork industry after leaving school.

As indicated in the findings of this study under research question 3, many factors are discovered as obstacles against acquisition of both theoretical and practical skills in woodwork. These obstacles include: inadequate funding; parents/students apathy towards

technical education, inadequate tools, equipments and training materials; lack of practically skilled teaching personnel and admission criteria.

The findings as regards poor and inadequate funding attested to (i) Fafunwa (1992), in his views on the state of funding of Technical College of Education in Nigeria states thus: Modern technical college is capital intensive and changing nature of technologies it deals with and that this tends to escalate cost. But the government is not always in a position to grant the required as cited from Chanchan, (1998).

(ii) According to Aguakobuo (2003), many good educational innovations, policies and instruments and students services need money. It is the financial foundation that actually determines the adequacy and relevance of school teaching materials, physical learning environment, and teacher's remuneration e.t.c. Incidentally all these influence the level of skills acquisition by students. With the irregular and most times, delayed payment of teachers salaries, couple with the dwindling economy, most teachers now spend more times moonlighting than teaching as high inflations reduces the values of their salaries.

In this situation, students do not acquire the level of skills they are supposed to acquire at the time of their educational program because teachers do not dedicate their time and effort to teach them (students).

The findings also indicate the lukewarm attitude of parents towards technical education as an indicator to ineffective training and manpower development in technical education in the state. The findings also reveal the inadequacy of required tools and equipments for students to work with in the course of their training.

The findings confirmed the view of Aguokoguo (2003) where he observed that most technical college programmers experience shortage of teaching personnel. He observed a situation where due to lack of practically and theoretically skilled teachers a

single woodwork teacher is made to teach as much as fifty six (56) students at practical lecture in an ill-equipped workshop. It absolutely meant that the teacher will not be able to meet up. In this situation, the teacher is more or less trying to teach a crowd which will obviously not grant effective skills and acquisition. An assessment of such students will prove that no reasonable skill is acquired.

The importance of the problem of admission criteria is also indicated in the findings. This reminds us of the view of Mbata (1990) where he emphasized that students should be allowed their intrinsic intelligence, interest, aptitude and initiative to the highest possible degree and that training should be given to those who need it and can profit it.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of the Study

The purpose of this research work has been to examine the relevance of acquisition of skills in woodwork trade to technical college students in Oyo State. In view of the analysis of data collected, findings regarding the need for both theoretical and practical skills necessary for self-employment and reliance in woodwork trade were made. It has been established in the findings that an efficient and effective woodworker is the one with both sound practical and theoretical skills.

Attention was drawn to obstacles militating against skills acquisition in the technical college in the state and findings attributed these obstacles to the ineffectiveness and incompetence of graduates of technical colleges.

The instruments used for collecting information for the research i.e. (the questionnaire) were developed and validated by two retired principles in Ogun State, a serving teacher in Osun State and my supervisor or (a lecture in the department of industrial and technology education). The validated instruments made up of twenty-one (21) items were prepared for ten (10) teaching/non-teaching staff and one hundred and fourteen (114) students all in the technical college, Saki, Oyo State. The instrument was analyzed using frequency count, mean, standard deviation and t-test. The formulated research questions were answered.

5.2 Implication of the Study

The findings of this study have some implications on staff and students of technical colleges, the government at all levels i.e. federal, State and Local; educational

institution, as well as the society at large. If the result of this study is given due consideration and implemented, the entire educational institutions in the country would be revamped to give adequate provisions to technical skills in woodwork right from the elementary school level; this will give room to adequate provision of technically proficient teachers to our technical colleges. The effect of this would remove apathy in the parents' mind towards sending their words to technical college.

The implication of adequate provision of technically proficient teachers to technical colleges and the consequential turn-around resulting from the removal of parents/students apathy could enhance technical manpower development in woodwork in the state particularly and the country of large.

The findings of this study bordering on obstacles militating against skills acquisition in woodwork shows that inadequate. Funding of the technical colleges is the bases of most of the problems entailed in the technical colleges. The result of this study, if implemented, will require all the three-tiers of government, Non-governmental organizations (NGO) and philanthropists within the society to rise up to the financial needs of the technical schools. If the technical institutions are financially buoyant the problems of inadequate tools, equipment and training materials, inadequate teaching personnel, as well as delay and inappropriate teachers' salaries and allowance would become a thing of the past with a resulting consequential effect.

5.3 Conclusion

In the light of pre-determined goals and objective for establishing the technical college by government toward skills acquisition for self reliance, various problems arose. The problems include, majorly, the non-exposure of parents to the prospects in woodwork

trade there by resulting to parent being biased as well as student nonchalant attitude; inadequate teachers/ training material and poor government funding.

The past we all know is gone, but the present is which we can improve upon with high hopes for the bright future which is yet to be. Definitely, the researcher has observed the obstacles militating against acquisition of skills vis-à-vis woodwork trade, by technical college students in Oyo state; the observed obstacles should be removed.

It is upon this background that I will base my recommendation for proper understanding of what the institution is all about and for the betterment of the students in skills acquisition for self-reliance and prospects in the woodwork trade.

5.4 Recommendations

For future prospects and for the technical students to see the relevance in the acquisition of skills in woodwork trade the following recommendations are made.

Awareness campaign by the government is very relevant to gearing up the parents/students towards realizing the prospects in the woodwork trade. This would help remove elements of bias by parents as regards the institution their children would be sent to i.e. university and NOT technical college as they used to prefer. The campaign should be done in such a way that parents/students would be exposed to some achievements of the past and present woodwork industrialist.

The government should Endeavour to make learning very easy and attractive to students. This can be done by providing textbooks and learning materials to technical college students and means of transport should also be provided where necessary. If possible hostel should be provided for student's comfort.

Without adequate funding, the institution cannot cope with the present challenges faced by the Nigeria economy which has been stupendously bastardized by uncontrollable

corruption and massive fraud. To this end, I will recommend that the government should make it a point of duty to ensure that adequate and regular funding is provided for the technical colleges.

The financial predicament in which most graduating technical college students find themselves at time is unimaginable. This situation calls for the Governments empowerment of the graduants of the technical college who either want to be self-employed in the woodwork industry or probably to further their education for a higher skill acquisition. Empowerment should not be done without adequate monitoring. Comprehensive insurance policy for those empowered by the government is very essential. Provision of job opportunities for grandaunts who wish to be given employment in the woodwork is equally very important.

The researcher is of the view that if all the above recommendations are adhered to and implemented, the relevance of acquisition of skills in the woodwork trade by technical college students in Oyo state would definitely be noticed.

Suggestion for Further Research:

The researcher makes the following suggestions for consideration and further research, based on the findings of this study.

1. Comparative Technical Education study in the U.S.A. china, e.t.c. (especially in woodwork) by teachers, lecturers and supervisors of technical education in the state should be sponsored by Government.
2. Students of woodwork at various levels should be made to visit some African countries as a means of exposing them to the prospects in the woodwork industries.

3. Special award for best graduating woodwork students in each technical college is also relevant.

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APPENDIX A

APPENDIX B

FORMULA

Formulas used in the study are as follows:

Mean	\bar{X}	$= \frac{\sum fx}{\sum f}$	
	\bar{X}		= Mean score
	Σ		= the sum of
	F		= frequency of respondents
	X		= the score
Standard deviation			
	SD	$= \frac{\sum f(X-\bar{X})^2}{N}$	
	SD		= Standard Deviation
	\bar{X}		= Mean
	Σ		= the sun of
	F		= frequency of respondents
	X		= the score
T-test formula			
	t-cal	$= \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{SD_1^2}{N_1} + \frac{SD_2^2}{N_2}}}$	
	t-cal		= t-test
	\bar{X}_1		= Mean response of staff

- \bar{X}_2 = Mean response of students
- SD_1 = Standard Deviation of staff
- SD_2 = Standard Deviation of students
- N_1 = Number of staff
- N_2 = Number of students

Hypothesis 1, Item 1, standard Deviation for staff (teaching and non- teaching) responses

X	F	FX	X-X	(X-X)²	F(X-X)²
4	5	20	0.8	0.64	3.20
3	3	9	0.2	0.04	0.12
2	1	2	-1.2	1.44	1.44
1	1	1	-2.2	4.84	4.84
	$\Sigma f = 10$	$\Sigma fX = 32$			$\Sigma f(X-X)^2 = 9.6$

$$\bar{X} = \frac{\Sigma fX}{\Sigma f}$$

$$SD_1 = \frac{\Sigma f(X-X)^2}{N_1}$$

$$\bar{X}_1 = \frac{32}{10}$$

$$SD_1 = \frac{9.6}{10}$$

$$\bar{X}_1 = 3.20$$

$$SD_1 = 0.96$$

Hypothesis 1, Item 1, standard Deviation for students responses

X	F	FX	X-X	(X-X)²	F(X-X)²
4	86	344	0.32	0.1024	8.8064

3	22	66	-0.68	0.4624	10.1728
2	4	8	-1.68	2.8224	11.2896
1	2	2	-2.68	7.1824	14.3648
	$\Sigma f = 114$	$\Sigma fX = 420$			$\Sigma f(X-X)^2 = 44.63$

$$X_2 = \frac{\Sigma fX}{\Sigma f}$$

Σf

$$SD_2 = \frac{\Sigma f(X-X)^2}{N_2}$$

N_2

$$X_2 = \frac{420}{114}$$

114

$$SD_2 = \frac{44.63}{114}$$

114

$$X_2 = 3.68$$

$$SD_2 = 0.39$$

$$t\text{-cal} = \frac{X_1 - X_2}{\sqrt{\frac{SD_1^2}{N_1} + \frac{SD_2^2}{N_2}}}$$

$$t\text{-test} = \frac{3.20 - 3.68}{\sqrt{\frac{(0.96)^2}{10} + \frac{(0.39)^2}{114}}}$$

$$= \frac{-0.48}{\sqrt{0.0922 + 0.0013}}$$

10 114

$$= \frac{-0.48}{\sqrt{0.0922 + 0.0013}}$$

$$= \frac{-0.48}{\sqrt{0.0935}}$$

$$= -0.48$$

0.0935

= -5.1337

APPENDIX C
QUESTIONNAIRE

THIS RESEARCH PROJECT IS DESIGNED TO ASSESS THE RELEVANCE
OF ACQUISITION OF SKILLS IN WOODWORK TRADE TO TECHNICAL
COLLEGE STUDENTS IN OYO STATE

SECTION A

Please carefully read each of the statements below and tick () in the column that most appropriately describes your level of agreement to the statements. The response categories are as follows;

- | | |
|--------------------|----|
| Strongly Agreed | SA |
| Agreed | A |
| Disagreed | D |
| Strongly Disagreed | SD |

Instruction: Please tick () appropriately on the space provided

Status: Teaching/Non-teaching staff () students ()

SECTION B

What are the theoretical skills needed by the Technical college students in Oyo state for self-reliance in the wood work industry?

S/NO	ITEMS	SA	A	D	SD
1.	Skills necessary to develop and run business				
2.	Individual and personal reliability skill in the area of personnel management				
3.	Vocational militating and economic adaptability leading to problem solving				
4.	Inter-personal skills organization and negotiation				
5.	Creativity and leadership skills				
6.	Machine & equipment maintenance culture and precautionary skills				
7.	Develop interest in the job				
8.	Ability to speak dearly				

SECTION C

What area of practical skills do students of Technical colleges need for self-employment in the woodwork trade?

S/NO	ITEMS	SA	A	D	SD
9.	Drawing workmanship skills				
10.	Communicate verbally with client				
11.	Carpentry and joinery skills				
12.	Mortising and tenoning skills				

13.	Skill in appropriate ration mixture of vanish for finish jobs				
14.	Skill in using various woodwork equipments				
15.	Be honest and trustworthy				

SECTION D

What are the obstacles affecting the acquisition of sound theoretical and practical skills by technical college students towards self reliance in woodwork trade and national development?

S/NO	ITEMS	SA	A	D	SD
16.	Inadequate funding				
17.	Parents/students apathy towards technical education				
18.	Inadequate tools, equipment and training materials				
19.	Lack of adequate practically skilled teaching personnel				
20.	Admission criteria				
21.	All of the above.				