

**ENTREPRENEURSHIP SKILLS NEEDED BYCRAFTSMEN IN ESTABLISHING
SMALL SCALE METAL MACHINING WORKSHOP IN NIGER STATE.**

BY

**SALIM SALEH
2016/1/63752TI**

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

MARCH, 2023

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

MARCH, 2023

DECLARATION

I hereby declare that this project has been conducted solely by me and that; it is the correct record of my own research work. It has not been presented for any award of a degree anywhere. All sources of information all acknowledged by means of books, journals and internet service or in the bibliography.

SALIM SALEH
2016/1/63752TI

Signature & Date

CERTIFICATION

This research project titled the“**ENTREPRENEURSHIP SKILLS NEEDED BYCRAFTSMEN IN ESTABLISHING SMALL SCALE METAL MACHINING WORKSHOP IN NIGER STATE.**” by Salim Saleh(2016/1/63752TI) meets the regulation governing the award of Bachelor of Technology Degree (B.Tech) in Industrial and Technology Education, Federal University of Technology, Minna, and is approved for its contribution to knowledge and literary presentation.

Prof. I.Y Umar
Project Supervisor

Signature & Date

Dr. T. M. Saba
Head of Department

Signature & Date

External Supervisor

Signature & Date

DEDICATION

I dedicate this work to almighty Allah the source of life, the fountain of knowledge, my helper and my refuge who is ever faithful and to my immediate family whose support cannot be quantified.

ACKNOWLEDGEMENTS

I would want to start by appreciating almighty Allah Who by His mercy and grace I was able to complete this work. It is on this note I would like to express my sincere gratitude to everyone who has supported me throughout the course of this project and my stay in this school in totality.

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Lastly I would like to acknowledge my colleagues for their valuable feedback and suggestions which have helped me improve my work.

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ABSTRACT

This project research looks into the entrepreneur skill needed by craftsmen in establishing small scale machining workshop in Niger state. Descriptive research design survey was used which is made of 28 items that were drafted under the following skills. Technical, management, planning and marketing skills needed by craftsmen and it was validated by some lecturers in the department of Industrial and Technology education. The research instrument was distributed to 30 technical college teachers in two technical colleges in Niger state and 30 entrepreneurs within Minna metropolis. A rating scale of 2.50 was adopted as the acceptance value for the main respondents with significant level of 0.05. All items listed under the identified entrepreneur skills were all agreed to.

It is recommended that the curriculum of technical colleges should be revised and all the identified skills be included and improved upon so as to enlighten technical college graduate on entrepreneurial skills important to succeed in establishing a business and also entrepreneur programs should be packaged with these entrepreneurial skills so that it can be taught to craftsmen.

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CHAPTER ONE

1.0

INTRODUCTION

1.1 Background of the Study

A machining workshop or a machine shop can be a small business say a job shop or portion of a factory whether a toolroom or a production area for manufacturing. It is an engineering workshop where machining, a form of subtractive manufacturing is done (Wikipedia accessed 7th February, 2023).

In a machine shop, machinists use machine tools and cutting tools to make part usually of metals or plastics (sometimes other materials like glass or wood).

Adeoti (2014) stated that entrepreneurial skills are necessary skills needed to succeed in any engineering trade, most especially in electrical installation and maintenance works. Entrepreneurial skills according to Adeyemo (2009), are developed competencies required to initiate and sustain a business venture. They are basic skills necessary to enable an individual start, develop, finance and succeed in business. Adeoti (2014) viewed entrepreneurial skills as abilities to have self-belief, boldness for internal management and external advancement of the firm in all aspects. Furthermore, he described entrepreneurial skills as the ability of an individual to exploit an idea and create an enterprise (small or big) not only for personal gain but also for social and development gains. Rychen and Salagnik (2003) noted that entrepreneurial skills are acquired through training that emphasizes the acquisition and development of appropriate knowledge and skills that will enable an individual to maximize the resources around him within the limits of his capacity. Thus, entrepreneurial skills are relevant skills and competencies that will enable graduates of electrical installation and maintenance works to start, develop, finance and succeed in electrical enterprises.

Owodunni *et al*, (2014) stated that if any entrepreneur is to be successful, he or she must be able to have some fundamental skills that makes them stand out. Hence, he defined skill as the learned capacity or ability to carry a predetermined often with the least outlay of time and energy or of both.

Okwonkwo (2017) explained that in the local African society, education is given purely for skill acquisition. The purpose was to equip the individual with marketable skills for wealth creation. Every individual was trained and empowered to create wealth. However, with time, emphasis shifted to western education and realization of this knowledge paved way for introduction of both academic and vocational curricular. The literacy curricular became the norms in both government and mission schools. Western education laid the solid foundation upon which the present educational system in Nigeria is assessed. The 9-3-4 system is embraced with the motive of developing the nation.

The recent massive unemployment of graduates of business education programme caused by global economic crisis/recession (economic melt-down) made the Federal government to emphasize the need for all Nigerians to strive for self-reliance through self-employment.

Okwonkwo (2017) further explained that the goal of entrepreneurship programme is to encourage and train graduates of secondary schools and higher institutions to take up self-employment. It appears to suggest that Filani's (2006) contention may have spurred the Federal Ministry of Education (FME) to introduce entrepreneurship education as a general course in the Tertiary Institution in Nigeria. He opined that opportunities for employment as a result of Technology education preparation are enormous. These opportunities include development of small-scale business, which if properly managed, would keep members of families gainfully employed and generate sufficient income with which to maintain their families and continually improve their standard of living.

1.2 Statement of the Problem.

Importance of entrepreneurship to economic development has been highlighted by many researchers and it is now well-recognized that education and training opportunities play a crucial role in cultivating future entrepreneurs and in developing the abilities of existing entrepreneurs to grow their business to greater levels of success. According to the European Commission (2008), the aim of entrepreneurship education and training should be to ‘develop entrepreneurial capacities and mindsets’ that benefit economies by fostering creativity, innovation and self-employment. Indeed, the role of Small and Middle Enterprises (SMEs) in terms of growth, competitiveness, innovation, and employment is now substantially embedded in the activity of the European Commission with the publication in June 2008 of the ‘Small Business Act for Europe’ and the ‘Entrepreneurship 2020 Action Plan’ in January 2013. The concept of an entrepreneurial Europe, which promotes the creation and development of innovative businesses, has led many of the EU Member States to strengthen their SME policies since academics, politicians, and policy makers increasingly acknowledge the substantial contribution that entrepreneurship can make to an economy (Bryat and Julien, 2001).

The educational system of any country is supposed to focus on their problems. For some years now one of the dominant social problems in Nigeria has been unemployment and it is an established fact that the economy cannot make use of labor of its entire people without special programmes. The present falling economic situation in Nigeria and the resultant massive unemployment for both youths and adults, emphasize the need for every Nigerian youths and adults to strive for self-reliance through self-employment. This calls for the acquisition of entrepreneurial skills among our school leavers.

Therefore, this research will help young entrepreneurs to acknowledge their skills and further research on the knowledge needed to grow successfully in a small-scale business arresting the current situation of the country which is mostly unemployment and poverty.

1.3 Purpose of the Study

The aim of this project is to determine entrepreneurship skills needed by craftsmen in establishing a small-scale manufacturing workshop in Niger state.

Specifically, the study seeks to identify;

- i. The technical skills needed by entrepreneurs to establish small scale machining workshop in Niger state
- ii. The management skills needed by entrepreneurs to establish small scale machining workshop in Niger state
- iii. The planning skills needed by entrepreneurs to establish small scale machining workshop in Niger state
- iv. The marketing skills needed by entrepreneurs to establish small scale machining workshop in Niger state

1.4 Significance of the Study

The discoveries of this study will be of deep advantage to students, graduates, technical teachers, curriculum planners, National Board for Technical Education, National Business and Technical Examination Board, policy makers, society and government at large. The student industrial technology education and entrepreneurs will profit from the findings of the study if identified entrepreneurial skills are merged into the curriculum of technical schools. These skills will be used to train the students, they will acquire it and graduate will be able to set up their own businesses and earn a living. The identified skills could be also used to retrain graduates of vocational schools, industrial technology education and entrepreneurs at skills

acquisition centers. technical teachers will also benefit from the findings of this study. The findings could be used to organize workshops and seminars for teachers in order to build their capacity for effective implementation of entrepreneurial.

This study will serve as an eye opener to teachers thereby making them know the necessary entrepreneurial skills that can make students to be self-reliance. Based on the findings, teachers can write textbooks that will bring income to their families. Teachers can adopt the findings of the study for teaching and this will less their jobs in preparing fresh less notes.

1.5 Research Questions

The following research questions guided the study:

1. What are the technical skills needed by craftsmen in establishing small scale machining workshop in Niger state?
2. What are the management skills needed by craftsmen in establishing small scale machining workshop in Niger state?
3. What are the planning skills needed by craftsmen in establishing small scale machining workshop in Niger state?
4. What are the marketing skills needed by craftsmen in establishing small scale machining workshop in Niger state?

5. 1.6 Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

H01: There is no significant difference between the mean respondents on the technical skills needed by craftsmen for establishing small scale machining workshop in Niger state.

H02: There is no significant difference between the mean respondents on management skills needed by craftsmen for establishing small scale machining workshop in Niger state

CHAPTER TWO

2.0 REVIEW OF RELATED LITERATURE

The review of literature to this study was organized under the following sub headings:

1. Conceptual Framework

- Concept of entrepreneurship
- Entrepreneurial skills

2. Theoretical Framework

- Entrepreneur theory
- Craftsmen theory
- Small scale business theory
- Machining Workshop theory

3. Review of Related Empirical Studies

4. Summary of Review of Related Literature

2.1 Conceptual Framework

2.1.1 Concept of entrepreneurship

The word entrepreneurship is widely used today. However, offering a specific and ambiguous definition of entrepreneurship is still challenging. This is not because the definition is not available, but because there are too many, and even these definitions rarely agree with each other on some essential characteristics of entrepreneurship. For instance, Kinbly in Inegbenagbor (1989) defined entrepreneurship as willingness and

ability of an individual to seek out investment opportunities, to establish and run an enterprise successfully. According to Gana (2001), entrepreneurship is the willingness and the ability of an individual to seek out investment opportunities in an environment and be able to establish and run an enterprise successfully based on the identified opportunities. Hisrich (2002), defined entrepreneurship as the process of creating something different with value by devoting the necessary time and effort; assuming the accompanying financial, psychological and social risk; and receiving the resultant rewards of monetary and personal satisfaction. A more expanded definition of entrepreneurship was given by the entrepreneurship centre of Miami University of Ohio as cited by Aliyu (2008) as the process of identifying, developing and bringing a vision to life. The vision may be an innovative idea, an opportunity, or simply a better way to do something. The end result of this process is the creation of new venture, formed under conditions of risk and considerable uncertainty. The Entrepreneur The factor of production which coordinates other aspect of production is entrepreneur. According to Gana (2001), the word entrepreneur was derived from a 17th century French word *Entreprendre* meaning undertaking. He said further that the word was use to describe people who understood military expedition. Later on word entrepreneur was applied to people that undertook contracts on high profile government projects such as construction of roads, bridges etc. Kibly in Inegbenegbor (1989), defined entrepreneur as an individual who has the willingness and ability to seek out investment opportunities, establish and run an enterprise successfully. According to Miami University of Ohio in Aliyu (2008), entrepreneur is an individual that identifies, develops and brings vision to life under condition of risk and a considerable uncertainty. The vision may be an innovative idea, an opportunity or simply a better way to do something. Usman (2006) defined entrepreneur as an innovator who implements changes within a market by

carrying out of new combinations. He stated further that, carrying out of the new combinations can take several forms; the introduction of a new good or quality thereof; the introduction of new method of production; opening of a new market; the congress of new source of supply of new materials or parts; the carrying out of the new organization of any industry. However, Osuala (2009), viewed entrepreneur as a person that self employed. He stated further that owner of small businesses are entrepreneurs because they have chosen to assume risks, identify business opportunities, gather resources, initiate action and establish organization to meet some demands of market opportunity. In all these definitions, an entrepreneur is a person who manages human and materials resources for the pursuit of prestige and economic reward. Also one could deduce four characteristics of entrepreneur:

- He organizes production processes which produces goods and service
- He is a risk-taker, he ventures where others fear to tread
- He is often a deviant or non-conformist and
- He is a decision-maker.

Okonkwo (2017) recorded that Entrepreneur skill is a carefully planned proves that eventuates into the acquisition of entrepreneur competencies. It is the acquisition of skills and ideas for the sake of creating employment for one's self and for others. This skill acquisition includes the development based on creativity. Personal empowerment and development is necessary for every individual and most importantly for the youths. One needs to have the specific job function or technical skills to pursue a particular vocation but along with the functional skill and knowledge. It is the personal empowerment of the individual that helps him succeed in the enterprise.

Personal empowerment skill training imparts mind training helping to learn to focus, concentrate, analyze and even be objective in his thinking. Positive thinking, learning to be

assertive and affirmative as well as being balanced in thinking, learning to be assertive and affirmative as well as being balanced in thinking at all times, ability to manage stress and work under pressure are some of the skills that are must for every successful entrepreneur. There is therefore the need forentrepreneurship skill education where all these skills could be learnt through training. Osuala (2004) defined entrepreneurship education as a programme or part of the education programme that prepares individuals to undertake the formulation and operation of a small business enterprise. It is a programme of instruction that enables the beneficiary to be properly equipped to establish and operate a profit oriented business venture. Entrepreneurship education involves a specialized training given to students of Technology and Vocational Education and training to enable them acquire the skills, ideas and managerial abilities and capabilities for self-employment rather than being employed for pay. Abhimanyu (2008) saw Entrepreneurship education as enterprise education. The author further defined enterprise education as learning towards developing in young people those skills competencies, understanding and attribute which equip them to be innovative, and to identify, create, initiate and successfully manage personal, community business and work opportunities, including working for themselves. Oduma (2012) noted that Entrepreneurship education seeks to prepare people especially youths to responsible, enterprising individuals who become entrepreneurs or entrepreneurial thinkers and who contribute to economic development and sustainability of their societies or community. The introduction of entrepreneurial Skills training Technical College injects a new spirit in the mindset of the graduate beneficiaries of the entrepreneurial study (Oduma 2012). This will no doubt help to make the students to become self-reliant or self-employed on graduation. Technology education in its foundation level has Entrepreneurship component. Thus, it is often perceived as education “for and about” business or training in business skills, attitudes and

competencies, (Okoro, 2007). For instance, graduate of Technology education are able to find jobs in industries and personal establishment.

2.1.2 Entrepreneurial skills

Entrepreneurial skills are essential skills needed to succeed in any engineering trade, most particularly machining workshop. According to Adeyemo (2009) entrepreneurial skills are developed competencies required to initiate and sustain a business venture. They are basic skills needed to enable you start, develop, finance and succeed in business. Adeoti (2017), viewed entrepreneurial skills as abilities to have self-belief, boldness, for internal management and external advancement of the firm in all aspects. He also described Entrepreneurial skills as the ability of an individual to exploit an idea and create enterprise (small or big) not only for personal gain but also for social and development gains. Hisrich and Peters (2002), also defined Entrepreneurial skills as the ability to create something new with value by devoting the essential time and effort, assuming the accompanying financial, psychic and social risks, and receiving the resulting rewards of monetary and personal fulfillment and independence. Therefore, Rychem and Solagnik (2003) noted that entrepreneurial skills are learnt through tanning that stresses the acquisition and development of suitable knowledge and skills that will enable an individual to make best use of the resources around him within the limits of his ability. Entrepreneurial skills consist of real utilization of ideals, information and facts that help a learner developed abilities, marketing, services, or being fruitful employee of organizations Alabi (2017). In this study, Entrepreneurial skills are the rudimentary skills require to enable students of machining workshop in the technical college starters, develop, finance, and prosper in machining enterprises and these are needed by the students through entrepreneurship training. Support for skill manpower needs for Nigeria economic, industrial and technology development and declining fate of paid employment demands that students of machining workshop and other

vocational trades in the technical college should own suitable entrepreneurial skills for the pursuit of self-reliant and employer of labor. According to Alabi (2017), training of the students to acquire entrepreneurial skills is the surest way of coping in a distressed and depressed society. In the opinion of Ogwo (2004) entrepreneurial skills deficiency has been implicated for failure of some technical colleges' products who venture into self-employment.

Furthermore, Walden in Agbogidi (2007), stressed that business failure can be attributed to many factors such as economic, personal condition, owner's lack of managerial skills and personal qualifications to operate a business. Consequently, students of machining workshop in technical colleges need training on entrepreneurship so that they can be a potential entrepreneur in machining trade.

Alabi (2017) underscored the need for trainees to be taught basic entrepreneurial skills because most of them after training establish their own business and also engage in training others. Hereafter, for students of machining work in the technical colleges to operate effectively on machining enterprise, there are five basic skills they must really have to function effectively as a machining entrepreneur. These skills are: technical skills, marketing skills, management skills, financial management skills and communication skills.

2.2 Theoretical Framework

2.2.1 Entrepreneur theory

The theory of entrepreneurship, namely the entrepreneurial value creation theory, explains the entrepreneurial experience in its fullest form, from the entrepreneurial intention and the discovery of an entrepreneurial opportunity, to the development of the entrepreneurial competence, and the appropriation of the entrepreneurial reward. The theory of entrepreneurship provides in sufficient detail the interiors of the entrepreneurial process using

a two-stage value creation framework. In the first stage of venture formulation, the entrepreneur driven by a desire for entrepreneurial reward (i.e., entrepreneurial intention) leverages the entrepreneurial resources at hand to sense an external opportunity (cue stimulus) and effectuate the entrepreneurial competence that is sufficient to move to the second stage. Several ventures fail at this stage. In the second stage of venture monetization, the entrepreneur may acquire external resources such as venture capital or strategic alliance to effect growth. Investors face an adverse selection problem when entrepreneurial ability and venture quality are difficult to ascertain. Entrepreneurs may use incentive signals to secure a higher valuation offer from the investors. A business model design with embedded dynamic capabilities can reconfigure the entrepreneurial competence to create sustained value and appropriate the entrepreneurial reward.

2.2.2 Craftsmen theory

A craftsman is an artisan who build, create. Innovate and initiate an idea, a business or a concept. A craftsman is a typical entrepreneur. In workshop practice, a craftsman is someone who works with metal or metal tools and design or create an object for the purpose of serving human needs.

2.2.3 Small scale business theory

The Nigerian concept of small-scale business also called Small and Medium Enterprise (SMEs) is some how divergent but the central bank of Nigeria with SMEs and equity investment scheme defined small scale business as any enterprise with a maximum asset less than two hundred million (200,000,000) excluding land and capital and with the number of staffs not less than ten and not more than three hundred Emmanuel (2018).

A business which functions on a small-scale level involves less capital investment, less number of labor and fewer machines to operate is known as a small business.

Small scale Industries or small business are the type of industries that produces goods and services on a small scale. These industries play an important role in the economic development of a country. The owner invests once on machinery, industries, and plants, or take is a lease or hire purchase. These industries do not invest more than one crore. Few examples of small-scale industries are paper, toothpick, pen, bakeries, candles, local chocolate, etc., industries and are mostly settled in an urban area as a separate unit.

2.2.3.1 Characteristics of Small-Scale Industries

Ownership: They have a single owner. So it is also known as a sole proprietorship.

Management: All the management works are controlled by the owner.

Limited Reach: They have restricted area of operation. So they may be a local shop or an industry located in one area.

Labor Intensive: Their dependency on technology is very little because they are dependent on labor and manpower.

Flexibility: Because they are small, they are open and flexible to sudden changes, unlike large industries.

Resources: They utilize local and immediately available resources. They do better utilization of natural resources and limited wastage.

2.2.3.2 Categories of Small Business

On the basis of capital invested, small business units can be divided into the following categories:

- i. Small Scale Industry (Before 2006)

They invest in fixed assets of machinery and plant, which does not surpass than five billion naira (#5,000,000,000).

For export improvement and modernization, expenditure ceiling in machinery and plant is five crores.

ii. Ancillary Small Industrial Unit

This industry can hold the status of an ancillary small industry if it supplies a minimum 50 per cent of its product to another business, i.e. the parent unit.

They can produce machine parts, components, tools or standard products for the parent unit.

iii. Export Oriented Units

This industry can possess the status of an export-oriented unit if it exports exceeds 50 per cent of its manufactures.

It can opt for the compensations like export bonuses and other grants awarded by the government for exporting units.

iv. Small Scale Industries Owned by Women

An enterprise operated by women entrepreneurs in which they alone or combined share capital minimum of 51 per cent.

Such units can opt for the special grants from the government, with low-interest rates on loans, etc.

v. Tiny Industrial Units

It is an Industrial or a company whose expenditure on machinery and plant does not exceed one billion naira (#1,000,000,000)

vi. Small Scale Service and Business

It is a fixed asset investment on machinery and plant excluding land and building should not surplus four hundred million naira (#400,000,000)

vii. Micro Business Enterprises

It is a tiny and small business sector.

The investment in machinery and plant should not exceed fifty million naira (#50,000,000).

viii. Village Industries

The industries which are located in rural areas and manufacture any product performs any service with or without the utilization of power is called village industries.

They have fixed investments on capital as per head, workers, and artisan, which does not exceed three hundred thousand naira (#300,000)

ix. Cottage Industries

It is also known traditional or rural industries.

These industries are not covered by the capital investment criterion.

2.2.4 Machining Workshop theory

A machine shop is a room, building, or company where machining, a form of subtractive manufacturing, is done. In a machine shop, machinists use machine tools and cutting tools to make parts, usually of metal or plastic (but sometimes of other materials such as glass or wood). It can also be a small business (such as a job shop having a single or multiple machinery) or a portion of a factory, whether a toolroom or a production area for manufacturing. Each shop has its own tools and machinery which differ from other shops in quantity, capability and focus of expertise.

2.3 Review of Related Empirical Studies

Metal work is one of the vocational and technical education programmes and also one of the numerous trades offered in the Technical colleges in Northeastern states. The trade comprises of a blend of both theory and practical that leads to the production of goods and services by the use of tools and metals (NBTE, 2001). Metal work offered in the technical college also comprises other trade components such as machine shop practice, welding and fabrication, forging, heat treatment and foundry practice (Ede, 2003). Competencies in these areas are the thrust of metal work in Technical College. Abifaran (1998) while affirming the increasing demands in the training of metal work craftsmen stated that they have to be exposed to basic practical foundations such as principle and operation of production machines like automatic lathe, magnetic chucks and center less grinding machine. There is unemployment and poverty in Nigeria. The level of poverty and unemployment with their attendant social ills in the country seems to continue to increase at alarming rate despite the introduction of TVET in Nigerian schools. Nowadays a lot of businesses fail. Okwonkwo (2017) noted that business failure is rampant in the society. The underlying reason according to them that small scale business is risk area and full of uncertainties.

An entrepreneur thinking of starting a business needs a broad array of entrepreneurial skills training in the critical skills of entrepreneurial development to succeed in the competitive market. Skills are practical activities which make one to be employable, self-reliant, selfemployed and relevant to the society. She further expressed that entrepreneurs must possess these skills that are necessary to enable them to start, finance, and market their own business enterprises enterprise. They include: technical skill, management skill, financial skill, marketing, skill, ICT skill, risk management skill and innovative skill. For instance, students of Technology acquire technical skill training in order to accomplish a specific task being performed in an organization. These skills are related to knowledge of and proficiency

in activities involving processes, methods and procedures and the ability to use and specific techniques Okwonkwo (2017)

Okwonkwo (2017) noted that the people of the north east geo-political zones states Nigeria who engage in metal work business of various ranging from welding and fabrications, foundry, machining, sheet metal construction among others fail to remaining in the business for a long time. Thus, based on the foregoing, it seems that there is a problem in entrepreneurial skills development for technology graduates due to lack of skills needed to own business. It is against the situation that it becomes necessary to conducts this study to identity the skills need by technology education students in entrepreneurial development in technical college in northeast zone, Nigeria.

Based on the challenges facing Nigeria, Okwonkwo (2017) explained that the Government in a bid to address the problem of unemployment, has established a number of programmes including National Directorate of Employment (NDE) under which entrepreneurship Education was set up to encourage and train graduates of the educational system to take up self-employment ventures since white collar jobs cannot be guaranteed to all. To show the government commitment in equipping the youths with skills that will help them to be self-reliant, entrepreneurship education was later introduced in Technical College (Filani, 2006). Ile (2001) stressed further that despite the fact that government equip graduates with the training needs in order to reduce the unemployment rate; unemployment seems to multiply on a daily basis. This might be attributed to graduates lack of entrepreneurship skills and competence in setting up new business. Training programmes in entrepreneurship are not properly organized. Some Technical colleges implements government directives on the teaching of entrepreneurship by teaching it as a general course with little or no time for demonstration of skills. In addition, some do not attach any credit unit to the course, hence, making students to see entrepreneurship as a mere university requirement for graduation.

2.4 Summary of Review of related Literatures

In Nigeria today, there is utmost need to become an entrepreneur. This is because of the large number of working population and especially graduates who go into the labor market. Since the demand for employment is high, there is need to be self-independent in order to catch up with demands of the society which is to become a creator or an inventor of many goods and services. Hence, the need to be an entrepreneur.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

This chapter describes the research design, area of study, population of the study, sampling and sampling techniques, instrument for data collection, validation of instrument, administration of instrument, method of data collection, method of data analysis and decision rule respectively.

3.1 Research Design

To achieve the stated purpose of this research, descriptive survey was adopted because it involves the use of questionnaires and interviews to determine the views of the entrepreneurial skills needed by craftsmen in establishing small scale machining workshop. Survey research design is a proposal or plan which specifies how data relating to a given problem should be collected and analysed. Hence, descriptive survey design is considered the best for this study because of the type of information needed for this investigation.

3.2 Area of the Study

The study was carried out in Niger state, Nigeria. Its capital is Minna (both Bosso and Chanchaga Local Government Areas combined). Its locals are mostly Gbagyi, Nupe and the Koromost according to Emmanuel (2018). The state is shared boundaries with Kogi in the south, Kaduna and Kebbi in the north, Abuja in the east and Kwara with the Niger republic in the west.

3.3 Population of the Study

The target population for this study was made up of 60 respondents comprising of 30 technical teachers in technical colleges and 30 registered entrepreneurs were chosen from

Minna because of the researcher's experience and knowledge of Minna. The population of the technical college's teachers were obtained from the Niger State Ministry of Education.

3.4 Sample and Sampling Techniques

The main locations of entrepreneurs were positively selected because of the high concentration of entrepreneurs in these areas. 5 entrepreneurs were selected from 6 areas which amounted to 30 for this study. Technical college teachers were not sampled because their numbers were manageable.

3.5 Instrument for Data Collection

The instrument that is used for data collection is structure questionnaire developed by the researcher for this study. It consists of two (2) parts. Part I consists of introduction and Part II consist of instructions to guide the respondents on how to complete the questionnaire and contains section (A-C) of according to the research question. Section A shows the necessary instrument and personal data of the respondent, section B consist of 4 technical skills needed by craftsmen and 3 management skills needed by craftsmen. Similarly, section C consist of 3 planning skills and 4 marketing skills needed by craftsmen in establishing SMEs in small scale machining workshop. All the items are to be completed by indicating the proper respondent's best perception using four-point rating scale. Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

3.6 Validation of the Instrument

To ensure validity of the instrument a draft copy of the questionnaire will be submitted to experts in the Department of Industrial and Technology Education of Federal University of Technology, Minna. So, validations suggestion will be use to modify and produce the final copy of the instrument before the administration of the instrument. This is to ensure that the instrument can elicit essential information desired for the study.

3.7 Administration of the Instrument.

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

3.8 Method of data collection

All the sixty respondents (technical college teachers and registered entrepreneurs) will be administered with the questionnaire. A research assistant also assisted during the administration of the instrument. The researcher administered the questionnaire to the respondents and the completed questionnaires were collected from the respondents. The researcher studied the respondent's response to the items to obtain a satisfactory data.

3.9 Method of data analysis

Data collected was analysed using mean and t-test for the research questions. A four (4) point rating scale is used to analyse the data as shown below.

Strongly Agree (SA) = 4points

Agree (A) = 3points

Disagree (D) = 2points

Strongly Disagree (SD) = 1point

The formula below was used to calculate the mean.

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

Where:

- \bar{X} = mean
= sum of normal value (summation)
- X = weight of the response
- F = frequency
- N = number of respondents to the items

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

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

3.9.1 Decision Rule

The level of the mean score of 2.50 will be chosen as the agreed. This is interpreted relatively according to the 4-point rating adopted for this study. In view of the latter items with a calculated mean of 2.50 and above is targeted as agreed. Meanwhile, any item with a mean of 2.49 and below is disagreed. Also, the statistics t-test is used to test the hypothesis at 0.05 level of significance to compare the mean response of the two group. A critical value of ± 1.960 is selected based on the on the degree of freedom at 0.05 significance. Thus, every item with t-calculated value less than the critical value will be consider as insignificance while every item with t-calculated value equal or greater than the critical value will be regarded as significance.

CHAPTER FOUR

4.0 PRESENTATION AND ANALYSIS OF DATA

This chapter deals with the presentation and analysis of data according to the research questions and the hypothesis for the study being done.

4.1 Research question 1

What are the technical skills needed by craftsmen in establishing small scale machining workshop in Niger state?

Table 1. Mean respondents on technical skills needed by craftsmen in establishing small scale machining workshop in Niger state.

S/N	ITEMS	\bar{X}_1	\bar{X}_2	X_t	SD ₁	SD ₂	REMARKS
1	Ability to Identify different types of metals for specific machining operation	3.39	3.17	3.28	0.76	0.88	Agreed
2	Critical thinking in solving problems	3.24	3.00	3.12	0.87	0.99	Agreed
3	Ability to prepare flat surfaces with shaping machine	3.36	3.56	3.46	0.67	0.91	Agreed
4	Ability to read blue prints	3.44	3.28	3.36	0.68	0.79	Agreed
5	Ability to operate Lathe	3.30	3.15	3.27	0.86	0.98	Agreed
6	Ability to use micrometer during machining	3.54	3.60	3.72	0.97	0.99	Agreed
7	Ability to maintain workshop safety	3.35	3.56	3.76	0.69	0.92	Agreed

Key

N=60

\bar{X}_1 = mean of technical college teachers

\bar{X}_2 = mean of the entrepreneurs

N_1 = technical college teachers

N_2 = entrepreneurs

SD_1 = standard deviation of technical college teachers

SD = standard deviation of entrepreneurs

The respondents agreed to all the items in table 1. This was possible by the use of the decision mean which was 2.5 set as the bench mark for accepting or rejecting an item. This decision mean is calculated from the four-point scale used.

4.2 Research question 2

What are the Management skills needed by craftsmen in establishing small scale machining workshop in Niger state?

Table 2. Mean respondents on management skills needed by craftsmen in establishing smallscalemachining workshop in Niger state.

S/N	ITEMS	X	X	X_t	SD_1	SD_2	REMARKS
1	Strategic thinking ability for managing	3.09	2.97	3.03	0.67	0.78	Agreed
2	Good coordination	3.28	3.68	3.48	0.76	0.65	Agreed
3	Being organized	3.24	3.08	3.16	0.94	0.87	Agreed
4	Time management skills	3.04	3.10	3.00	0.87	0.89	Agreed
5	Confidence in executing assigned responsibilities	3.36	3.56	3.46	0.67	0.94	Agreed
6	Ability to work with a team	3.34	3.28	3.30	0.68	0.79	Agreed

7	Knowledge of the job	3.10	3.15	3.27	0.85	0.98	Agreed
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Key

N=60

\bar{X}_1 = mean of technical college teachers

\bar{X}_2 = mean of the entrepreneurs

N₁ = technical college teachers

N₂= entrepreneurs

SD₁ = standard deviation of technical college teachers

SD = standard deviation of entrepreneurs

The respondents agreed to all the items in table 2. This was possible by the use of the decision mean which was 2.5 set as the bench mark for accepting or rejecting an item.

4.3Research question 3

What are the planning skills needed by craftsmen in establishing small scale machining workshop in Niger state?

Table 3. Mean respondents on planning skills needed by craftsmen in establishing small scale machining workshop in Niger state.

S/N	ITEMS	X	X	X _t	SD ₁	SD ₂	REMARKS
1	Ability to keep time with respect to work	3.29	3.23	3.26	0.78	0.78	Agreed
2	Creative and imaginative skills	3.42	2.83	3.13	0.72	0.69	Agreed
3	Effective use of social and mass media	3.26	3.08	3.16	0.64	0.87	Agreed
4	Proactiveness	3.00	3.01	3.42	0.67	0.79	Agreed

5	Strong communication skills	3.36	3.55	3.45	0.69	0.95	Agreed
6	Flexibility in approach to planning	3.46	3.24	3.36	0.67	0.89	Agreed
7	Good focusing ability	3.20	3.25	3.27	0.84	0.96	Agreed

Key

N=60

\bar{X}_1 = mean of technical college teachers

\bar{X}_2 = mean of the entrepreneurs

N_1 = technical college teachers

N_2 = entrepreneurs

SD_1 = standard deviation of technical college teachers

SD = standard deviation of entrepreneurs

4.4 Research question 4

What are the marketing skills needed by craftsmen in establishing small scale machining workshop in Niger state?

Table 4. Mean respondents on marketing skills needed by craftsmen in establishing small scale machining workshop in Niger state

S/N	ITEMS	X	X	X_t	SD_1	SD_2	REMARKS
1	Needs for business plan creation	3.29	3.23	3.26	0.78	0.78	Agreed
2	Knowledge of previous or existing SMEs	3.42	2.83	3.13	0.72	0.69	Agreed
3	Product promotion skills	3.26	3.08	3.16	0.64	0.87	Agreed
4	Effective relationship with customers	3.23	3.11	3.00	0.77	0.90	Agreed
5	Ability to follow trends	3.09	3.81	3.44	0.70	0.88	Agreed

6	Having the desire to learn new marketing strategies	3.44	3.33	3.36	0.69	0.79	Agreed
7	Managing large workloads	3.30	3.22	3.27	0.88	0.99	Agreed

Key

N=60

\bar{X}_1 = mean of technical college teachers

\bar{X}_2 = mean of the entrepreneurs

N_1 = technical college teachers

N_2 = entrepreneurs

SD_1 = standard deviation of technical college teachers

SD = standard deviation of entrepreneur

The respondents agreed to all the items in table 4. This was possible by the use of the decision mean which was 2.5 set as the bench mark for accepting or rejecting an item.

4.5 Hypothesis 1

There is no significant difference between the mean respondents on the technical skills needed by craftsmen for establishing small scale machining workshop in Niger state.

Table 5T – test analysis of technical skills needed by craftsmen for establishing SMEs in machining workshop.

S/N	ITEMS	\bar{X}_1	\bar{X}_2	T-cal	SD_1	SD_2	REMARKS
1	Ability to Identify different types of metals for specific machining operations	3.39	3.17	1.18	0.76	0.88	Agreed
2	Critical thinking in solving problems	3.24	3.00	1.31	0.87	0.99	Agreed
3	Ability to prepare flat surfaces with shaping machining	3.36	3.56	3.65	0.67	0.91	Agreed
4	Ability to read blue prints	3.44	3.28	2.17	0.68	0.79	Agreed

5	Ability to operate Lathe	3.30	3.15	1.28	0.86	0.98	Agreed
6	Ability to use micrometer during machining	3.54	3.60	2.42	0.97	0.99	Agreed
7	Ability to maintain workshop safety	3.35	3.56	1.76	0.69	0.92	Agreed

Key

N=60

\bar{X}_1 = mean of technical college teachers

\bar{X}_2 = mean of the entrepreneurs

N_1 = technical college teachers

N_2 = Entrepreneurs

SD₁ = standard deviation of technical college teachers

SD = standard deviation of entrepreneurs

S = significant difference

NS = no significant difference

T – critical = ± 1.99

Table 5 showed that items 1 and 2 were not significant while items 3 and 4 were significant.

Therefore, the null hypothesis was rejected.

4.6 Hypothesis 2

There is no significant difference between the mean respondents on management skills needed by craftsmen in establishing small scale machining workshop in Niger state.

Table 6 – test analysis of management skills needed by craftsmen in establishing small scale machining workshop in Niger state.

S/N	ITEMS	X	X	T-cal	SD ₁	SD ₂	REMARKS
1	Strategic thinking ability for managing	3.09	2.97	2.13	0.67	0.78	Agreed

2	Good coordination	3.28	3.68	-0.82	0.76	0.65	Agreed
3	Being organized	3.24	3.08	-0.25	0.94	0.87	Agreed
4	Time management skills	3.04	3.10	2.13	0.87	0.89	Agreed
5	Confidence in executing assigned responsibilities	3.36	3.56	2.04	0.67	0.94	Agreed
6	Ability to work with a team	3.34	3.28	2.76	0.68	0.79	Agreed
7	Knowledge of the job	3.10	3.15	-0.27	0.85	0.98	Agreed

Key

N=60

\bar{X}_1 = mean of technical college teachers

\bar{X}_2 = mean of the entrepreneurs

N_1 = technical college teachers

N_2 = entrepreneurs

SD₁ = standard deviation of technical college teachers

SD = standard deviation of entrepreneurs

S = significant difference

NS = no significant difference

T – critical = ± 1.99

Table 6 showed that item 1 was significant while items 3 and 4 were not significant.

Therefore, the null hypothesis was rejected.

4.7 Findings

The following are the findings presented according to the research questions on the entrepreneurial skills needed by craftsmen for establishing small scale machining workshop.

The major findings on technical skills needed by craftsmen for establishing small scale enterprises in machining workshop are;

- i. Ability to Identify different types of metals for specific machining operations
- ii. Critical thinking in solving problems
- iii. Ability to prepare flat surfaces using shaping machine
- iv. Ability to read blue prints

- v. Ability to operate Lathe
- vi. Ability to use micro meter during machining
- vii. Ability to maintain workshop safety

The following are the main findings of management skills needed by craftsmen for establishing small scale enterprises in machining workshop.

- i. Strategic thinking ability for managing
- ii. Good coordination
- iii. Being organized
- iv. Time management skills
- v. Confidence in executing assigned tasks
- vi. Ability to work with a team
- vii. Knowledge of the job

The following are the main findings in planning skills needed by craftsmen for establishing small scale enterprises in machining workshop.

- i. Ability to keep time with respect to work
- ii. Creative and imaginative skills
- iii. Effective use of social and mass media
- iv. proactiveness
- v. Strong communication skills
- vi. Flexibility in approach to planning
- vii. Good focusing ability

The following are the main findings in marketing skills needed by craftsmen for establishing small scale enterprises in machining workshop.

- i. Needs for business plan creation

- ii. Knowledge of previous or existing SMEs
- iii. Product promotion skills
- iv. Effective relationship with customers
- v. Ability to follow trends
- vi. Having the desire to learn new marketing strategies
- vii. Managing large workloads

4.8 Discussion of Findings

It was reviewed in the findings that craftsmen must have certain skills in establishing small scale machining workshop. These skills identified in this research are planning, management, technical and marketing skills.

Namkere and Saba (2013) stated that entrepreneurial skills in technical and vocational educational training is essential to youth as a tool for starting and managing of an enterprise.

The findings from table 1 shows that the listed items were agreed with by the respondents, which are above 2.5. this showed that the respondents agreed that all the items listed are technical skills needed by craftsmen in establishing a small scale machining workshop in Niger state

The findings from table 2 shows that the listed items were agreed with by the respondents, which are above 2.5. this showed that the respondents agreed that all the items listed are management skills needed by craftsmen in establishing a small scale machining workshop in Niger state.

The findings from table 3 shows that the listed items were agreed with by the respondents, which are above 2.5. this showed that the respondents agreed that all the items listed are planning skills needed by craftsmen in establishing a small scale machining workshop in Niger state.

The findings from table 4 shows that the listed items were agreed with by the respondents, which are above 2.5. this showed that the respondents agreed that all the items

listed are marketing skills needed by craftsmen in establishing a small scale machining workshop in Niger state.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of the Study

This research focuses on the entrepreneur skills needed by craftsmen in establishing small scale machining workshop in Minna metropolis. The purpose of this research is to outline lacking entrepreneurial skills craftsmen need to establish and effectively manage their business.

The instrument used for asking of information contains 4 research questions which were distributed to the respondents and the results were analyzed using the frequency count, mean and standard deviation where 0.05 was used as the level of significance.

5.2 Implications of the study

The research would help craftsmen in establishing businesses in machining workshop as it will arrest the setbacks involved.

The research also reviewed that entrepreneur program that will be of benefits to all kinds of entrepreneurs in managing and growing in their business

Moreover, it also opined that technical college curriculum should be updated with the current trend of the problems and solutions encountered by entrepreneurs by organizing seminars if necessary.

5.3 Contributions to Knowledge.

The findings of the study contributed to knowledge of possible causes of entrepreneurial skills in Niger state. It also creates more awareness to the possible causes of metal craftsmen and the strategies to improve entrepreneurial skills for better performance.

5.4 Conclusion

This research work reveals the entrepreneurial skills needed by craftsmen in establishing small scale machining workshop. These skills were identified as technical skills, management, planning and accounting/marketing skills. Several questions were asked and answered which serve as a guide in other to have a clear knowledge of the subject discussed. The findings also revealed that teachers in technical colleges needs to be trained and retrained on the use of various machines and equipment that are used in the machining workshop.

It is therefore, concluded that teaching of entrepreneurship education should be improved in technical colleges through the aforementioned skills as it will help in greater output of an entrepreneur

5.5 Recommendation

The following recommendations were made in the findings of this research;

- i. government should provide vocational training for technical teachers and craftsmen on the appropriate use of tools in machining workshop.
- ii. Machining curriculum should be updated from time to time by curriculum experts so that skills on various work will be imparted to graduate of technical colleges.
- iii. Craftsmen should learn leadership ability to motivate and influence staff and colleagues to meet organization goals and purpose.

5.6 Suggestion for further Studies.

- i. Impact of entrepreneurship education on roadside machining workshop in Minna metropolis
- ii. Entrepreneurship skills that contributes to the development of small-scale machining workshop in Minna metropolis.
- iii. Causes of poor entrepreneurial programme in Minna metropolis.

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ENTREPRENEURSHIP SKILLS NEEDED BY CRAFTSMEN IN ESTABLISHING A SMALL-SCALE MACHINING WORKSHOP IN NIGER STATE (ESCSMW)

Dear Respondent.

I am by name Salim Saleh with matric number 2016/1/63752TI. A final year student of the Department of Industrial Technology Education F.U.T Minna. I am conducting a research on the topic: **“entrepreneurship skills needed by craftsmen in establishing a small-scale machining workshop in Niger state.”** I therefore plead that you provide sincere and accurate answers to the questions below, as all information will be treated confidentially.

Thanks for your cooperation.

Yours sincerely

Salim Saleh

(Researcher)

INSTRUCTION: please tick (✓) appropriately in the boxes provided.

PARTI (BIO-DATA)

1. Gender? Male [] Female []
2. What level are you? 100 [] 200 [] 300 [] 400 [] 500 []

PARTII.

INSTRUCTION: Tick the appropriate answer from the table below

SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree

Section B.

What are the technical skills needed by craftsmen in establishing small scale machining workshop in Niger state?

SN	ITEMS	SA	A	D	SD
1	Ability to Identify different types of metals for specific machining operations				
2	Critical thinking in solving problems				
3	Ability to prepare flat surfaces using shaping machine				
4	Ability to read blue prints				
5	Ability to operate Lathe				
6	Ability to use micro meter during machining				
7	Ability to maintain workshop safety				

What are the Management skills needed by craftsmen in establishing small scale machining workshop in Niger state?

SN	ITEMS	SA	A	D	SD
1	Strategic thinking ability for managing				
2	Good coordination				
3	Being organized				
4	Time management skills				
5	Confidence in executing assigned tasks				
6	Ability to work with a team				
7	Knowledge of the job				

Section B.

What are the planning skills needed by craftsmen in establishing small scale machining workshop in Niger state?

SN	ITEMS	SA	A	D	SD
1	Ability to keep time with respect to work				
2	Creative and imaginative skills				
3	Effective use of social and mass media				
4	Proactiveness				
5	Strong communication skills				
6	Flexibility in approach to planning				
7	Good focusing ability				

What are the marketing skills needed by craftsmen in establishing small scale machining workshop in Niger state?

SN	ITEMS	SA	A	D	SD
1	Needs for business plan creation				
2	Knowledge of previous or existing SMEs				
3	Product promotion skills				
4	Effective relationship with customers				
5	Ability to follow trends				
6	Having the desire to learn new marketing strategies				
7	Managing large workloads				